Appendix B
Addendum to Individual Section 4(f) Evaluation

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Addendum to Section 4(f) Evaluation

SR 167 Puyallup to SR 509
Replacement of Puyallup River Bridge

Pierce County, WA

Prepared By:

WSDOT Olympic Region

XL-4105

July 2013

Prepared For:

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

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SR 167 Puyallup to SR 509
Replacement of Puyallup River Bridge
Addendum to Section 4(f) Evaluation

Introduction

Section 4(f) of the Department of Transportation Act of 1966, codified in Federal Law at 49 U.S.C. §303, declares that it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges and historic sites.

Section 4(f) specifies that the U.S. Secretary of Transportation may approve a transportation program or project requiring the use of publically owned land of a public park, recreation area, or wildlife and waterfowl refuges of national, state or local significance, or land of an historic site of national, state or local significance only if:

1) There is no feasible and prudent alternative to using the land; and
2) The program or project includes all possible planning to minimize harm to the park, recreation area wildlife and waterfowl refuges and historic sites.

This addendum has been prepared in accordance with Federal Highway Administration (FHWA) guidelines for Section 4(f) evaluation for the Puyallup River Bridge Replacement. The proposed alternative would use the State Route (SR) 167 Puyallup River Bridge.

Project History

The Washington State Department of Transportation (WSDOT) and Federal Highway Administration (FHWA) proposed the SR 167 Puyallup to SR 509 Extension project, also known as the SR 167 Extension project. They are the lead agencies for compliance with NEPA and SEPA. The SR 167 Extension project is in Pierce County, Washington, within the Cities of Fife, Puyallup, Edgewood, Milton and Tacoma. The environmental analysis for this project was completed in two tiers (stages). The Tier I Environmental Impact Statement (EIS) analyzed the location and environmental aspects of different corridor options and selected the environmentally preferred corridor. The Tier II EIS selected the preferred alignment within the corridor and the interchange configuration.

The Tier II Final Environmental Impact Statement (FEIS) along with Section 4(f) evaluation was issued in November 2006. The Federal Highway Administration (FHWA) issued the Record of Decision (ROD) in October 2007. There was not sufficient funding available to construct the project at that time. WSDOT received funding for preliminary engineering and to purchase right of way. WSDOT has acquired 103 properties that comprise 70% of the corridor right of way. WSDOT received additional funding to continue with right of way acquisition and preliminary engineering as part of the 2012 supplemental budget; however construction for the project remains unfunded.

The SR 167 Puyallup River Bridge (167/20E) replacement, which is a phase of the larger SR 167 Extension undertaking, was recently funded. The northbound SR 167 Puyallup River Bridge, a steel truss bridge, is also called the Meridian Street Bridge. Due to deterioration of the steel truss constructed in 1925, the replacement of the bridge has been re-prioritized and fully funded. The Legislature has mandated the design build process for delivery of this project.

Purpose of the Report

This addendum to the Section 4(f) evaluation is being prepared for this phase of the SR 167 Puyallup to SR 509 Freeway Extension project as discussed above. The original report is provided as Appendix 1 of this addendum. The 4(f) evaluation of the Meridian Street Bridge was not conducted during the Tier II EIS because at the time of the original Section 4(f) evaluation, this bridge was determined not eligible for listing on the National Register of Historic Places (NRHP).

During a recent review of the status of the Meridian Street Bridge, WSDOT determined the bridge is now eligible for listing in the NRHP. The State Historic Preservation Officer (SHPO) has concurred with WSDOT's determination. The documentation is provided as Appendix 2. The Historic Inventory Report is also provided in Appendix 2.

This report will be an addendum to the original Section 4(f) evaluation and will document the impact of the project action. This documentation will be used to modify the NEPA process that was completed for the SR 167 Extension undertaking.

Proposed Action

The subject project proposes to construct a new two-lane bridge across the Puyallup River on SR 167 and to remove the Meridian Street Bridge. The project is located in the City of Puyallup in Sections 21 and 22, Township 20 North Range 4 East. WSDOT will remove, store, and maintain the Meridian Street Bridge until the local jurisdictions, King and Pierce Counties, can install it as a pedestrian bridge on the Foothills Trail or WSDOT will develop a marketing plan for the bridge and actively seek other preservation uses until 2019.

Existing Facility

The SR 167 Puyallup River Bridge is designated Bridge Number 167/20E by WSDOT and it is located at milepost 6.40 just outside the City of Puyallup. The Meridian Street Bridge, which is a steel truss bridge, was built in 1925. It was determined through inspection to be structurally deficient; the steel members are exhibiting severe corrosion and the concrete deck and piers are delaminating.

The Puyallup River Bridge is 371 feet long. The traveled lane width on the bridge is 21 feet from curb to curb with a five foot wooden sidewalk structure attached to the right side of the bridge. In January of 2011, WSDOT implemented a load restriction requiring vehicles larger than 10,000 pounds gross vehicle weight to use the right lane only. This was due to floor beam deterioration detected during a routine bridge inspection. In addition, the width of the bridge does not meet current standards for lane and shoulder widths, which is problematic due to the high volume of truck traffic that utilizes the bridge.

The structure is rated as *structurally deficient* based on the floor beam deterioration. Due to the magnitude of deterioration of the structure, annual maintenance costs will begin to rise unless major rehabilitation of the structure occurs.

Since original construction of the bridge, two major projects have taken place to lengthen the life span of the bridge. The first project occurred in 1951, and it replaced the approach spans with new wooden truss structures. In 1991 a second project took place that added new horizontal members to the main steel truss structure, replaced the end bearings, replaced the expansion joints and overlaid the slab. Since those projects have occurred, routine maintenance has occurred with repairs consisting mainly of replacing sheared rivets and spalled concrete.

In addition to the bridge's structural deficiency rating, the two-lane one direction bridge has sub-standard lane and shoulder widths. As a result, the bridge is consistently damaged due to traffic impacts to the barriers and sides of the structure. The floor beams also experience damage due to high vehicular loads. The damage is shown in Exhibits 1 and 2.

Exhibit 1 - Existing Puyallup River Bridge – Concrete Spalling

Exhibit 2 – Puyallup River Bridge –Typical rust in Beams

Section 4(f) Property

WSDOT, on behalf of FHWA, has determined that the Meridian Street Bridge is eligible for inclusion in the NRHP. The Department of Archaeology and Historic Preservation has concurred in this determination, as documented in Appendix 2. This bridge is currently the longest, simply supported, *steel riveted Warren through truss span* built prior to 1940 remaining on the Washington State highway system. The bridge is also significant for its unusual and unique truss configuration.

Alternatives Analysis

The purpose of this alternatives analysis is to evaluate the impacts associated with various alternative design strategies for the project and select the alternative that best meets the project purpose while minimizing adverse impacts to the historic steel truss bridge.

The *purpose and need* of the SR 167 Puyallup River Bridge Replacement project is to provide a structure that meets current standards for lane and shoulder widths and to address the structural deficiency of the existing bridge in order to preserve the SR 167 crossing over the Puyallup River as a part of the SR 167 corridor.

The SR 167 Puyallup River Bridge Replacement project must also address the *purpose and need* of the SR 167 Extension project undertaking. The undertaking will construct a new SR 167 / SR 161 interchange as a part of the SR 167 Freeway Extension. **(See Exhibit 3)** This new interchange will require five northbound lanes and two southbound lanes across the Puyallup River. Currently, there are two lanes for each direction on the adjacent existing steel truss and

concrete bridges that cross the river. The current bridge replacement project is the first phase of the larger undertaking, and it will address the deficiencies of the Meridian Street Bridge.

The design alternatives analyzed in this addendum are: Alternative 1 – No Build, Alternative 2 – Rehabilitation of the Existing Steel Truss, Alternative 3 – Preserve Steel Truss / Construct New Bridge & Alignment, Alternative 4 – Remove Steel Truss / Construct New Bridge and Alternative 5 – Construct New Bridge & Alignment / Remove Steel Truss. These alternatives are discussed below under *avoidance alternatives*, that completely avoid the Section 4(f) resource and *least harm discussion*, where those alternatives that have Section 4(f) resource impacts are discussed and the alternative that has the least overall impact is identified.

Avoidance Alternatives

Alternative 1 – No Build

This alternative would maintain the existing steel truss Puyallup River Bridge as it currently exists. No work would be performed except for routine maintenance. Due to the anticipated continued deterioration of the bridge, at some point routine maintenance will not be sufficient to keep the bridge open to vehicular traffic. Considering the structure is currently load restricted, it is in need of rehabilitation now.

This alternative was rejected during the 2006 FEIS as not prudent. The Preferred Alternative included replacing the steel truss bridge with a new five-lane concrete bridge. The No-Build Alternative would not meet the *purpose and need* of the project or the undertaking. Maintaining the existing steel truss would not provide a bridge that is structurally sufficient, it would not provide a bridge that meets current standards, and it would not accommodate the new freeway interchange to be constructed. In the near term, the No-Build alternative would prohibit truck traffic from traveling southbound across the Puyallup River on SR 167 which would create significant issues for this important freight route.

This alternative would result in long term maintenance issues, would not be consistent with the long term solution for maintaining the SR 167 corridor, and would not allow the Undertaking to be successfully completed. This alternative would not meet the *purpose and need* of either the current project or the undertaking.

Alternative 3 – Preserve Steel Truss / Construct New Bridge & Alignment

This alternative would construct a new bridge on an alternate alignment, and preserve the existing steel truss bridge in-place. This strategy would construct a new bridge adjacent to the existing structures on a new alignment to allow vehicular traffic to be re-routed onto the new bridge while maintaining the steel truss in its current location.

Preserving the steel truss in its current location would present challenges related to the structural integrity of the bridge for an extended period of time. The structural floor beam members have severe corrosion issues. Unless the floor beams are replaced, they would continue to deteriorate to the point of not being able to support the bridge deck. If these floor beams are replaced, the

new beams would impact the historical features of the bridge. Additionally, there is no funding to maintain the bridge at this time.

There also exists the issue of the need to displace the steel truss to construct the ultimate SR 167/161 interchange as part of the corridor project undertaking. The steel truss bridge lies within the footprint of the future five-lane bridge for the undertaking. Moving the future five-lane bridge outside the footprint of the existing bridges (to the east) would entail additional project impacts (right of way, business, water quality, etc.). If the steel truss bridge were to be maintained in its current location, it would need to be moved once funding for the undertaking was secured. The first order of work for the undertaking would be to remove the steel truss and to seek an alternate location for preservation of the structure. This would also require duplication of the environmental documentation and permitting process to allow the removal of the steel truss to occur, requiring additional time and money. Therefore, there is no advantage to leaving the bridge in place during this phase of work.

This alternative could meet the needs of replacing the Meridian Street Bridge, but it would not meet the *purpose and need* for completing the ultimate undertaking which is to build the SR 167 to SR 509 Corridor Extension project. Additionally, this alternative is not prudent due to the challenges of preserving the steel truss in its current location and because this alternative would not meet the *purpose and need* of the ultimate undertaking.

Least Harm Discussion

Alternative 2 – Rehabilitation of the Existing Steel Truss

This alternative would rehabilitate the existing steel truss to the point that it would be structurally sufficient to support freight traffic and would meet current seismic code. The rehabilitation effort would require that the steel members for the floor beams be replaced along with the removal and replacement of the concrete deck. The rehabilitation would also require significant repairs to be done to the foundations and bridge bearing pads to enable the structure to meet current seismic code.

Due to the significant work required, the rehabilitation effort would impact the historical integrity of the steel truss. The new steel members and revisions to the bridge's sub-structure would cause adverse impacts to the historic bridge.

The rehabilitation alternative would not meet the *purpose and need* of the project or the undertaking. Rehabilitation of the steel truss would not provide a bridge that meets current standards for lane and shoulder widths. The current bridge width is too narrow to safely carry two lanes of traffic, particularly considering the high volume of truck traffic. To widen the structure, virtually all of the horizontal steel members would need to be replaced and the layout of the members would also change. This drastic change to the steel truss would compromise its historic integrity.

This alternative would result in expenditures equivalent to the construction of a new bridge, and it would also create significant impacts to traffic and the environment for the duration of the

rehabilitation effort. This alternative would also require displacement of the steel truss to occur in the future as a part of the undertaking to allow the new interchange to be constructed. The rehabilitated steel truss would not be compatible with the new freeway interchange to be constructed as a part of the undertaking. This would result in additional adverse impacts to the historical bridge and the efforts to upgrade the structure and seismically retrofit the bridge foundations would ultimately be lost.

This alternative would not meet the *purpose and need* of either the current project or the undertaking.

Alternative 4 – Remove Steel Truss / Construct New Bridge

This alternative would construct a new bridge in place of the existing steel truss. This plan would require the removal of the steel truss as a first order of work. The new structure would be a two-lane bridge due to the limitations of current funding. The new bridge would meet current standards for lane and shoulder widths, and it would meet current seismic code.

Because current funding limits the project to constructing a two-lane bridge, the new bridge would need to accommodate future widening to five lanes to meet the *purpose and need* of the new SR 167 Extension project undertaking.

Removing the steel truss as a first order of work would constrain the amount of time WSDOT would have to locate a site to preserve the bridge and secure the necessary funding from a third party. Constructing only two lanes of a future five lane bridge would also introduce the risk of the ultimate design dictating revisions to the new structure to be compatible with future design and/or seismic criteria.

Additionally, Alternative 4 would entail greater environmental impacts than Alternative 5. For instance, to remove the steel truss bridge in Alternative 4 a temporary work bridge would need to be constructed over the Puyallup River to accommodate construction equipment, while the existing concrete bridge handles traffic during the construction phase. This would result in more work below the ordinary high water line (OHWL) than Alternative 5, where a temporary work bridge would not be required. Also, this alternative would require purchasing more right of way than Alternative 5.

This alternative, despite the challenges identified, would meet the *purpose and need* of both the project and the new SR 167 Extension project undertaking.

Alternative 5 – Construct New Bridge & Alignment / Remove Steel Truss

This alternative would construct a new bridge and roadway alignment for southbound traffic, and remove the steel truss as a last order of work. **Exhibit 4** details the alignment for the proposed bridge. This plan would successfully accommodate the future new interchange by providing a two-lane structure for southbound traffic, which matches the planned configuration of the new interchange. Northbound traffic would be shifted from the steel truss onto the existing adjacent concrete bridge. Once traffic is moved off of the steel truss, the truss would be removed. In the future, the SR 167 Extension project will remove the existing concrete bridge and construct a

new five lane structure for northbound traffic in the footprint of the existing steel truss and concrete bridges. **(See Exhibit 3)**

Alternative 5 would have less of an environmental impact than Alternative 4. It would require purchasing less right of way, no temporary work bridge would be required and less work below the OHWL would occur under Alternative 5.

Removing the Meridian Street Bridge as a last order of work would provide additional time to identify a site for long term preservation of the steel truss, and it would allow more of an opportunity to identify sources of funding for long term preservation of the structure.

This alternative would meet the *purpose and need* of both the project and the SR 167 Extension project undertaking.

Least Harm Determination

23 CFR 774.3(c)(1) requires that FHWA approve the alternative that causes the least overall harm in light of the statute's preservation purpose. The following factors must be balanced in making this determination:

(i) The ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property);

(ii) The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection;

(iii) The relative significance of each Section 4(f) property;

(iv) The views of the official(s) with jurisdiction over each Section 4(f) property;

(v) The degree to which each alternative meets the purpose and need for the project;

(vi) After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f); and

(vii) Substantial differences in costs among the alternatives.

In the following discussion the two alternatives that meet the project's *purpose and need* are discussed. They are **4** and **5.**

The ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property);

Alternative 5 would provide additional time to identify a site for long term preservation of the Meridian Street Bridge and would allow more of an opportunity to identify sources of funding for long term preservation of the structure.

The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection;
Alternative 5 would allow for the NRHP-eligible steel truss structure to be removed, stored and maintained; and provides the best chance for it to be preserved for an alternate use. For further detail, see the Measures to Minimize Harm section below.

The relative significance of each Section 4(f) property;
There is only one Section 4(f) property used by the project.

The views of the official(s) with jurisdiction over each Section 4(f) property;
SHPO has concurred with WSDOTs determination that the project, as proposed, will have an adverse effect on the NRHP eligible Meridian Street Bridge and is consulting on the revision of the project MOA to address this adverse effect.

The degree to which each alternative meets the purpose and need for the project;
Alternatives 4 and 5 both meet the *purpose and need* of the SR 167 Puyallup River Bridge Replacement project. However, Alternative 5 would better accommodate the future new interchange by providing a two-lane structure for southbound traffic, which matches the planned configuration of the new interchange. In the future, the SR 167 Extension project (the undertaking) will remove the existing concrete bridge and construct a new five-lane structure for northbound traffic in the footprint of the existing steel truss and concrete bridges. Alternative 4 would construct only two lanes of a future five-lane bridge because current funding limits the project to constructing a two-lane bridge. Constructing only two lanes of a future five-lane bridge would introduce the risk of the ultimate design dictating revisions to the new structure to be compatible with future design and/or seismic criteria, potentially adding additional cost to the project.

After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f); and
Alternative 4 would result in more work below the OHWL and would require purchasing more right of way than Alternative 5.

Substantial differences in costs among the alternatives.
Alternative 4 would have increased costs, as compared to Alternative 5, requiring the purchase of additional right of way and requiring a temporary work bridge not needed for Alternative 5.

Based on the factors above, FHWA has made a preliminary finding that Alternative 5 is the least harm alternative.

Summary

The goal of this project is to provide bridges and a roadway profile compatible with the SR 167 Extension project, which is currently in the preliminary engineering stage and for which right of way has been acquired. The No-Build alternative and refurbishing the steel truss alternative would not meet the *purpose and need* of the undertaking. To ensure forward compatibility with the SR 167 Extension project undertaking, constructing a new bridge in the present location of

the steel truss or constructing a new alignment while preserving the steel truss in place do not satisfy the *purpose and need* of the undertaking. The alternative of constructing a new bridge in place of the existing steel truss bridge could satisfy the *purpose and need* of the undertaking and would meet the needs of the current project. However, current funding would limit the new structure to a two-lane bridge. The new structure would need to accommodate future widening to five lanes to meet the *purpose and need* of the new SR 167 Extension project undertaking. Constructing only two lanes of a future five-lane bridge would introduce the risk of the ultimate design dictating revisions to the new structure to be compatible with future design and/or seismic criteria. Also, because the steel truss would have to be removed as a first order of work, WSDOT would be constrained in the amount of time available to locate a site to preserve the bridge and secure the necessary funding. By constructing a two-lane bridge on a new alignment and then removing the existing steel structure as a last order of work, WSDOT would have additional time to identify a site for long term preservation of the steel truss and to secure sources of funding for long term preservation of the structure. Also, by utilizing the existing concrete bridge to handle north-bound traffic the future SR 167 Extension project undertaking would be able to remove this structure and construct a new five-lane bridge in the footprint of the existing steel truss and concrete bridges. The existing concrete bridge will not meet future design and/or seismic criteria and will have to be removed during the future SR 167 Extension project undertaking.

The most prudent alternative would be to move forward with Alternative 5; constructing a two-lane bridge on a new alignment, and remove the existing steel structure. This alternative meets the *purpose and need* of the undertaking, resolves the imminent issue of the structural deficiency of the steel truss, and positions WSDOT for the best opportunity to preserve the Meridian Street Bridge at a new location.

FHWA and WSDOT have concluded that there is no feasible and prudent alternative to the use of the bridge and therefore proposes to replace the bridge and remove the existing steel truss.

Exhibit 3 - SR 167 / 161 Ultimate Interchange

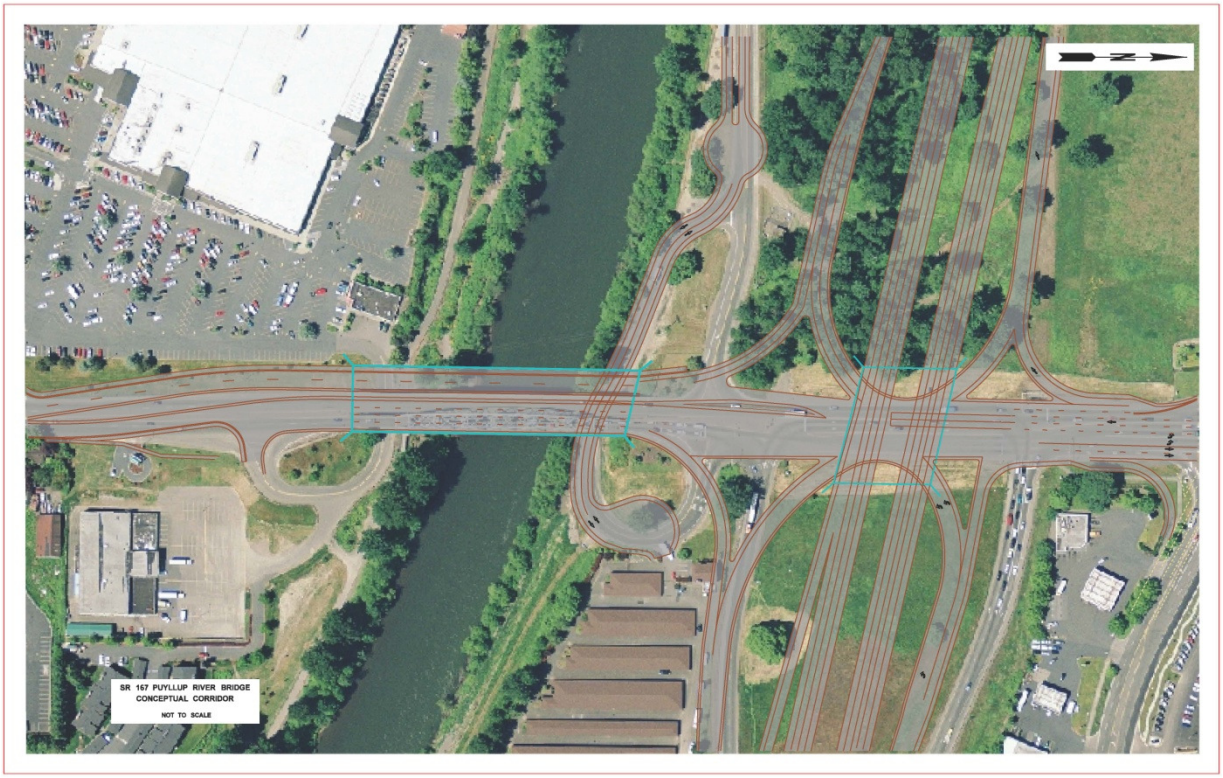

Exhibit 4 - Proposed New Bridge Alignment

Measures to Minimize Harm

The project includes all possible planning to minimize harm and to provide necessary mitigation of Section 4(f) property as detailed below:

1. The project team investigated the surrounding area to determine if the Meridian Street Bridge could be moved upstream and utilized as a pedestrian facility. There are no pedestrian facilities or destinations on the north side of the river, so it is not likely the bridge would be utilized by pedestrians in the vicinity of its present location. In addition, there would be significant right of way costs associated with moving the bridge to a nearby location. An additional challenge would be to secure a local or private entity that would take on the long term maintenance and liability responsibility for a crossing at a nearby location.

2. By removing the structure as a part of the current project, the Meridian Street Bridge will be available to any organization interested in preserving the bridge without the need to obtain environmental permits or to mobilize expensive equipment that would be necessary to work over the river. The steel truss bridge will be inspected, dismantled, and re-furbished on land and will be available as soon as a location for long term preservation is found.

3. WSDOT will arrange to remove, store and maintain the NRHP-eligible steel truss structure to preserve it for an alternate use. WSDOT is working with King and Pierce Counties regarding the potential for use of the Meridian Street Bridge on the Foothills Trail between Enumclaw and Buckley across the White River. King and Pierce Counties are receptive to the potential preservation of the bridge on their trail system. The counties and WSDOT partnered to complete an engineering analysis to confirm that the structure can be successfully refurbished and relocated to the trail crossing. The engineering study has been completed, and the results are that refurbishing the steel truss and relocating it to the Foothills Trail would cost more than constructing a new pedestrian bridge. WSDOT and the counties are investigating to see if there are grant opportunities available for preserving transportation facilities that could be utilized to close the funding gap. Concurrent with these efforts, WSDOT is seeking alternative partners that may have a need and/or interest in the re-use of the historical steel truss bridge. Preservation and re-use of the steel truss as a pedestrian facility would be a positive result for the project.

4. Documentation of the Meridian Street Bridge will be completed in accordance with the Historic American Engineering Record (HAER) standards.

5. Agreement between SHPO and FHWA has been reached through the Section 106 process of the National Historic Preservation Act (NHPA), and a Memorandum of Agreement (MOA) was signed which details measures to minimize harm. The final MOA was signed in May 2013.

6. In the event a partner is not found to re-use and preserve the steel truss, WSDOT is prepared to store the bridge and market its availability for preservation. The advertisement of the availability of the bridge would occur as soon as it became apparent that the current plan for re-use on the Foothills trail is not feasible. The steel truss would remain in-place until the end of the current project in late 2015, being advertised the entire duration. If no alternative interested parties came forward during that time, WSDOT would remove the steel truss from its current location and store it until June of 2019 at which time funding for further storage and maintenance of the bridge would be evaluated.

Public and Agency Coordination

The public was involved in the SR 167 Extension project in the Tier I EIS and the Tier II EIS with public meetings, newsletters, e-mail notifications, project websites and open houses. The Citizen's Advisory Committee was formed to assist in recognizing local issues and concerns. The project team frequently made presentations to Chambers of Commerce, business associations and civic organizations. The public will now be invited to participate in the SR 167, Puyallup River Bridge Replacement Project by reviewing the Supplemental EIS and providing comments on the information. The input from the public will be carefully considered in agency decision making.

Conclusion

There is no feasible and prudent alternative to the use of the Puyallup River Steel Bridge. WSDOT has incorporated all measures to minimize harm to the Section 4(f) resource. The enclosed MOA demonstrates that the requirements of Section 106 of the NHPA (16 U.S.C. 470) have been satisfied.

Enclosure and Reference

1. Memorandum of Agreement between SHPO and FHWA
2. Appendix 1: SR 167, Tier 2 EIS Section 4(f) Evaluation
3. Appendix 2: DAHP concurrence letter & Historic Inventory Report

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AMENDED MEMORANDUM OF AGREEMENT
BETWEEN THE FEDERAL HIGHWAY ADMINISTRATION, THE US ARMY CORPS OF ENGINEERS, AND THE WASHINGTON
STATE HISTORIC PRESERVATION OFFICER PURSUANT TO 36 CFR Part 800.6(a)
REGARDING THE SR 167 PUYALLUP TO SR 509 PROJECT, PIERCE COUNTY, WASHINGTON

WHEREAS, the US Department of Transportation, Federal Highway Administration (FHWA) has provided financial assistance to the Washington State Department of Transportation (WSDOT) for the SR 167 Puyallup to SR 509 Project (the undertaking) between SR 161 (Meridian Street North) in Puyallup and SR 509 in Tacoma, located in Pierce County, Washington, Federal Aid Project No. STPUL-0167(026); and

WHEREAS, FHWA has provided financial assistance to WSDOT for the first phase of the undertaking, Aid Project No. BR-0167(047); and

WHEREAS, the undertaking's design has been modified since the amended agreement was signed in 2009, thus warranting this amended agreement; and

WHEREAS, WSDOT conducted cultural resources surveys in the area of potential effects (APE), as documented by Luttrell (2004)[1], and Kiers and Holstine (2012)[2].

WHEREAS, FHWA has determined, and the State Historic Preservation Officer (SHPO) has concurred, that the undertaking as presently designed will have an adverse effect upon the following properties determined to be eligible for inclusion in the National Register of Historic Places (NRHP):

- Thomas and Lynn Novotney House at 7001 20th St. E (DAHP #27-4125, WSDOT #P202)
- George Dill House at 7717 Valley Ave. East (DAHP #27-4114, WSDOT # P239)
- Puyallup River Bridge #167/20E (Meridian Street) steel truss

WHEREAS, FHWA has notified the Advisory Council on Historical Preservation (ACHP) of the undertaking's effects pursuant to 36 CFR Part 800.6(a)(i), effective January 11, 2001, implementing Section 106 of the National Historic Preservation Act (16 U.S.C. 470f); and

WHEREAS, ACHP has declined to participate, but requests that pursuant to 36 CFR 800.6(b)(iv), a Memorandum of Agreement (Agreement) be developed in consultation with SHPO, and related documentation be filed with ACHP at the conclusion of the consultation process; and

WHEREAS, a Department of the Army permit, pursuant to Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act, will be required from the United States Army Corps of Engineers, Seattle District (COE), to conduct activities related to the construction of the undertaking, and the COE has participated in the consultation; and

WHEREAS, WSDOT has participated in the consultation; and

WHEREAS, formal Section 106 consultation pursuant to 36 CFR 800.2(a)(4) was initiated with the Puyallup Tribe in 2000, and with the Muckleshoot Indian Tribe, Squaxin Island Tribe, and Yakama Nation in 2012.

NOW, THEREFORE, FHWA, SHPO, DAHP, COE, WSDOT, and the interested Tribes agree that the undertaking shall be implemented in accordance with the following stipulations, in order to take into account the effects of the undertaking on historic properties.

STIPULATIONS

FHWA will ensure that the following measures are carried out:

1. Historic Property Documentation:

A. WSDOT will complete Level 2 Historic Engineering Record documentation and video documentation of the Puyallup River Bridge #167/20E (Meridian Street) steel truss and make the HAER report and video available via a web site dedicated to the historical documentation of the bridge.

B. WSDOT will contract with an on-line historical encyclopedia devoted to Pacific Northwest history for an entry devoted to the history of the Puyallup River (Meridian Street) Bridge.

C. WSDOT has consulted with the SHPO and completed documentation to DAHP Level 2 standards of historic properties at 7001 20th Street East and 7717 Valley Avenue East (DAHP #27-4125), in the undertaking's area of potential effects Holstine (2009)[3].

2. Historic Property Preservation:

A. NRHP-eligible buildings as described in item 1 above have been demolished after materials were salvaged for potential re-use. WSDOT provided DAHP with documentation of contacts made with salvage companies prior to demolition of the structures, per stipulations in the previous amended MOA.

B. For the Puyallup River Bridge #167/20E (Meridian Street) steel truss, WSDOT will proceed per the following conditions:

a) WSDOT will, after completing the HAER and video documentation of the bridge, remove the steel truss from its current location and move it to the adjacent proposed alignment for the SR 167 freeway extension. WSDOT will then make any necessary repairs to the steel truss to assure structural integrity and secure the structure for storage until it can be relocated to the White River, or to an alternate location, until 2019. The moving, repair and storage of the steel truss will be done in accordance with the SR 167 Puyallup River / Meridian Street Bridge - Treatment Plan, Appendix A. WSDOT will be solely responsible for moving the steel truss and ensuring its structural and historical integrity are maintained during transport and storage.

b) WSDOT, King and Pierce Counties, and the cities of Enumclaw and Buckley will continue to seek funding and grant opportunities to close the funding gap between the cost for reusing the steel truss and constructing a new pedestrian bridge. Depending on the availability of matching funds, these agencies will apply for grants to provide funding for the preservation and re-use of the steel truss on the Foothills Trail across the White River. WSDOT, King and Pierce Counties and the cities of Buckley and Enumclaw will work together to draft and submit the grant applications. WSDOT will contribute matching funds with the removal of the steel truss, and the remaining funds delegated for disposal of the steel truss. King and Pierce Counties and the City of Enumclaw and Buckley have identified the completion of the Foothills Trail between the two counties as a top priority. As such, these agencies will continue to actively seek funding opportunities to complete the trail system and provide matching funds for the grant applications. The agencies will coordinate with the consulting parties to ensure all applicable grant opportunities are explored. See Appendix B for a list of known grant opportunities the group of agencies will investigate.

c) The results of the grant applications are anticipated to be available by the spring of 2015. If the grant applications are successful in providing the necessary funds to preserve the Puyallup River steel truss bridge as a part of the Foothills Trail, King and Pierce Counties will enter into an MOU that will identify ownership and long term maintenance responsibilities. If the grant applications are not successful WSDOT will ensure the grants are re-submitted the following funding cycle. King and Pierce County will sign the grant applications and participate in their re-submittal as funding and staffing allow. The group of agencies will also investigate other funding opportunities.

d) If by the summer of 2017 King and Pierce County determine it is not economically feasible to preserve and re-use the steel truss on the Foothills Trail, WSDOT will, in consultation with SHPO and interested consulting parties, prepare a Bridge Marketing Plan for advertising the availability of the bridge for preservation at an alternate location utilizing the video documentation and web site completed per Stipulation 1 (above). WSDOT will actively seek an alternate preservation site for the bridge until June 2019.

e) WSDOT will dispose of the steel truss if, after June 2019, no preservation sites or reasonable and sufficient funding sources have been successfully identified for the permanent preservation of the bridge.

3. Inadvertent Discovery:

At least 90 days prior to advertising the undertaking for construction, an Unanticipated Discovery Plan (UDP) will be developed by WSDOT, which will include any monitoring deemed necessary, a communications protocol detailing who will be contacted in the event of a discovery, and specific methods to be employed to protect any cultural resources, including human remains, discovered during construction. The UDP will be developed in coordination with SHPO and the consulting tribes.

4. Review of Historic Property Survey and Determinations:
Significant portions of the SR 167 Extension have yet to be finalized and construction may not occur for some time. Therefore, per standard operating methods WSDOT will, on behalf of FHWA, review the undertaking's APE as phases begin final design to: 1) determine if previously non-eligible properties obtained qualities that could make them eligible for the NRHP (e.g., becoming older than 50 years); 2) reevaluate the effects of the undertaking on prehistoric site 45PI488 per 36 CFR 800.5; and, 3) in consultation with the SHPO and tribes, complete cultural resources investigations in areas not previously surveyed. These activities will occur during the final design of a phase and be completed prior to construction of any distinct phase of the undertaking. Adverse effects on 45PI488 or any other historic property will require amendment of this agreement.

5. Amendment of the Agreement:
If any of the consulting parties to this Agreement determine that the terms of the Agreement cannot be met or believe a change is necessary, they will immediately request the signatory parties to consider an amendment or addendum which will be executed in the same manner as the original Agreement. A copy of the amended Agreement will be filed with the ACHP, pursuant to 36 CFR 800.6(c)(7).

6. Dispute Resolution:

A. If a dispute arises regarding implementation of this Agreement, the signatory parties will consult with the objecting party to resolve the dispute. If FHWA determines that the dispute cannot be resolved, FHWA shall forward all documentation relevant to the dispute to ACHP and request comment, which will be provided pursuant to 36 CFR 800.6(b).

B. If at any time during implementation of the measures stipulated in the Agreement, should an objection to any such measure or its manner of implementation be raised by a member of the public, FHWA shall take the objection into account and consult as needed with the objecting party, SHPO, or ACHP to resolve the objection.

7. Failure to Carry Out Terms:
Failure to carry out the terms of this Agreement requires that FHWA again request ACHP's comments in accordance with 36 CFR Part 800.7. If FHWA cannot carry out the terms of the Agreement:

A. It will not take or sanction any action to make an irreversible commitment that would result in an adverse effect to eligible properties covered by the Agreement;

B. Nor will FHWA foreclose ACHP's consideration of modifications or alternatives that could avoid or mitigate the adverse effect on the properties until the commenting process has been completed.

8. Duration & Termination:
This MOA will take effect immediately upon execution by the signatory parties. The terms of this MOA shall be satisfactorily fulfilled upon completion of the undertaking. Prior to completion of the undertaking, the signatories may consult to reconsider the terms of the agreement and propose its amendment. Unless terminated, this MOA will be in effect until FHWA, in consultation with the signatory and concurring parties, determines that all of its terms have been satisfactorily fulfilled.

In accordance with 36 CRF 800.6(c)(8), if any of the signatories determines that the terms of the MOA cannot or are not being carried out, they may consult to seek an amendment of the Agreement. If the Agreement is not amended, any signatory may terminate this MOA. If any signatory proposes to terminate this MOA, they shall promptly notify all other parties in writing of the proposed termination and shall include in their notification the reasons for proposing termination. If the MOA is terminated pursuant to this stipulation and FHWA determines that its undertaking will nonetheless proceed, FHWA shall request the comments of ACHP.

9. Monitoring and Reporting:
Within 90 days after carrying out the terms of the Agreement, as described in Stipulations 1 through 4, WSDOT shall report to all signatories on the actions taken.

10. Negligence:
To the extent consistent with Federal and State law, each party to this agreement shall be solely responsible for the negligence of its own officers, employees, and agents in the performance of this agreement.

This Memorandum of Agreement shall be filed with ACHP, which will provide evidence that FHWA has afforded ACHP an opportunity to comment on the SR 167 Puyallup to SR 509 Project and its effects on historic properties. Implementation of its terms is evidence that FHWA has taken into account its effects on historic properties and has satisfied the requirements of Section 106 of the National Historic Preservation Act (16 U.S.C. 470(f)).

[1] Luttrell, Charles
2004 *Cultural Resource Investigations for the Washington State Department of Transportation's SR 167: Puyallup to SR 509 Project, Pierce County, Washington.* Archaeological and Historical Services, Eastern Washington University, Cheney.

[2]Kiers, Roger and Craig Holstine
2012 *Cultural Resources Discipline Report, State Route 167 Puyallup River/Meridian Street Bridge Phase, SR 167 Extension – Puyallup to SR 509 Freeway Construction Project, Pierce County, Washington.* Washington State Department of Transportation, Olympia.

[3]Holstine, Craig
2009 *DAHP Level 2 Documentation, George Dill House and Thomas and Lynn Novotney House.* Washington State Department of Transportation, Olympia.

SIGNATORY PARTIES

Federal Highway Administration

By: Daniel M. Mathis Date: 05/02/2013
Daniel Mathis
Division Administrator

U.S. Army Corps of Engineers, Seattle District

By: Date: 23 Apr 2013
Bruce A. Estok, COL, USACE, Commanding

Washington State Department of Archaeology and Historic Preservation

By: Date: 5/6/13
Allyson Brooks, Ph.D.
State Historic Preservation Officer

INVITED SIGNATORIES

Washington State Department of Transportation

By: Date: MAY 1, 2013
Kevin Dayton
Regional Administrator

King County, Parks and Recreation Division

By: Date: 2/20/13
Kevin Brown
Division Director

Pierce County, Parks and Recreation Services

By: Kathy Kraft-Smith Date: 2/14/13
Kathy Kraft-Smith
Director

CONCURRING PARTIES

Puyallup Tribe of Indians

By:_____ Date:_____
Honorable Herman Dillon, Sr.
Tribal Chair

City of Enumclaw

By: Liz Reynolds Date: 2.27.2013
Liz Reynolds
Mayor

City of Buckley

By: Pat Johnson Date: 3/13/13
Pat Johnson
Mayor

Appendix A

SR 167 Puyallup River / Meridian Street Bridge

Treatment Plan

The SR 167 Puyallup River Bridge #167/20E (Meridian Street Bridge) is eligible for inclusion in the National Register of Historic Places (NRHP). WSDOT has identified the Foothills Trail crossing the White River as a potential location for the preservation of the Meridian Street Bridge. King County, Pierce County, the City of Enumclaw and the City of Buckley are committed to seeking funds to close the funding gap between the cost of reusing the steel truss and constructing a new pedestrian bridge. As a first stage of this commitment, WSDOT will remove the steel truss from its current location across the Puyallup River and store it immediately adjacent to its current location. This location will be to the northwest where the SR 167 freeway alignment will be constructed. The steel truss will be stored in this location until sufficient funding is secured for its preservation, or until 2019, in accordance with the following protocol:

Storage

- The bridge will be moved using appropriate measures to ensure the historical and structural integrity of the steel truss in accordance with industry standards for transportation structures. WSDOT Bridge Engineers will review and approve the detailed plans and structural calculations for the means and methods of picking and moving the steel truss. The consulting parties will be provided an opportunity to review the plans and calculations.
- Once moved to its temporary location, the steel truss will be supported at each panel point of the truss, with temporary footings to keep the structure at least 3' above ground. The temporary supports, and the details for removal and moving the truss, will be designed by and bear the seal of a licensed professional structural engineer.
- WSDOT will then address any significant corrosion issues by removing rust and re-painting locations of the steel truss as necessary to assure structural integrity during storage.
- The steel truss will be secured with fencing and periodically inspected at least once every 6 months to ensure damage and vandalism are prevented until it is relocated or until the year 2019. If damage or vandalism is observed, WSDOT will evaluate the damage or vandalism and take actions to address any significant damage to assure the structural integrity of the bridge during storage.

Preservation

- WSDOT will seek to preserve the eligibility for the NRHP, or local registers, of the steel truss at its new location across the White River, or an alternate location if one is identified later, by following the Secretary of the Interior's Standards for Rehabilitation during removal, maintenance, and re-erection of the truss.
- Once funding is secure, King and Pierce County (or other alternate future owner) will disassemble the steel truss and strip it of the lead paint and corrosion. The steel members will then be re-painted.
- During dis-assembly, the steel truss members will be marked appropriately to ensure they are re-assembled correctly.
- To the extent possible within funding limits, the steel truss will be re-erected across the White River (or other alternate location) preserving the character-defining features of the bridge in its original state (i.e., the steel truss as described in the Historic Property Report, not including the approach spans, sidewalk, rivets, or floor system).
- The plan for re-erecting the steel truss will be designed and stamped by a professional structural engineer.
- The consulting parties will be provided an opportunity to review any structural modifications and the plan for re-erection.

Appendix B

SR 167 Puyallup River / Meridian Street Bridge

Grant Opportunities

The following are a list of known grant opportunities WSDOT, King and Pierce County will investigate to provide funding for the preservation and re-use of the Meridian Street steel truss for a crossing of the White River as a part of the Foothills Trail. The team will determine which grants are applicable to the project, and will coordinate with the consulting parties to ensure appropriate grant opportunities are pursued. If additional grants become known, consulting parties shall notify Brenden Clarke at clarkeb@wsdot.wa.gov

- Transportation Enhancement Funds (the recent federal transportation bill, MAP 21, potentially reduces the amount of enhancement funds that will be available, but there will at least be some level of funding for the Puget Sound RTPO): http://www.wsdot.wa.gov/LocalPrograms/ProgramMgmt/TransEnhancement.htm

- Recreation and Conservation Funds: http://www.rco.wa.gov/grants/index.shtml

- Heritage Capital Projects Grants, through the WA State Historical Society. The deadline for the 2013-2015 funding cycle has passed, but applications for the 2015-17 cycle will be due in May 2014: http://www.washingtonhistory.org/heritageservices/grants.aspx

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Chapter 5

Section 4(f) Evaluation

Note: The Draft Section 4(f) Evaluation was distributed for review. The public comment period closed on October 4, 2005. The Final Section 4(f) Evaluation, prepared to address comments on the draft, will be Chapter 5 of the FEIS.

Tier II Final EIS

SR 167

Puyallup to SR 509

Federal Highway Administration
Washington Division

DRAFT SECTION 4(F) EVALUATION

SR 167 PUYALLUP TO SR 509
TIER II EIS
PIERCE COUNTY, WASHINGTON

Submitted Pursuant to 42 U.S.C. 4332(2)(c) and 49 U.S.C. 303

by

U.S. Department of Transportation
Federal Highway Administration

Washington State Department of Transportation

August 2005

August 16, 2005
Date of Approval

For FHWA

The following persons may be contacted for additional information concerning this document:

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Chapter 5 ~~Draft~~ Section 4(f) Evaluation

5.1 Introduction

The Washington State Department of Transportation (WSDOT) is planning the completion of the SR 167 freeway between the SR 509 freeway in the City of Tacoma and SR 161 (North Meridian) in north Puyallup. The project would be constructed within Pierce County, Washington, in the cities of Fife, Puyallup, Edgewood, Milton, and Tacoma. The new freeway would replace the existing SR 167 arterial route between the I-5 Bay Street interchange and Puyallup via River Road and North Meridian. The freeway is designed as four lanes, plus inside HOV lanes to be constructed between I-5 and SR 161 at a future date. Figure 5-1 is a project vicinity map; Figures 5-2 and 5-3 identify the 4(f) resources evaluated in this report that are within the proposed corridor.

5.1.1 Section 4(f) Resources

Section 4(f) of the Department of Transportation Act of 1966, codified in Federal law at 49 U.S.C. §303, declares that "[i]t is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites."

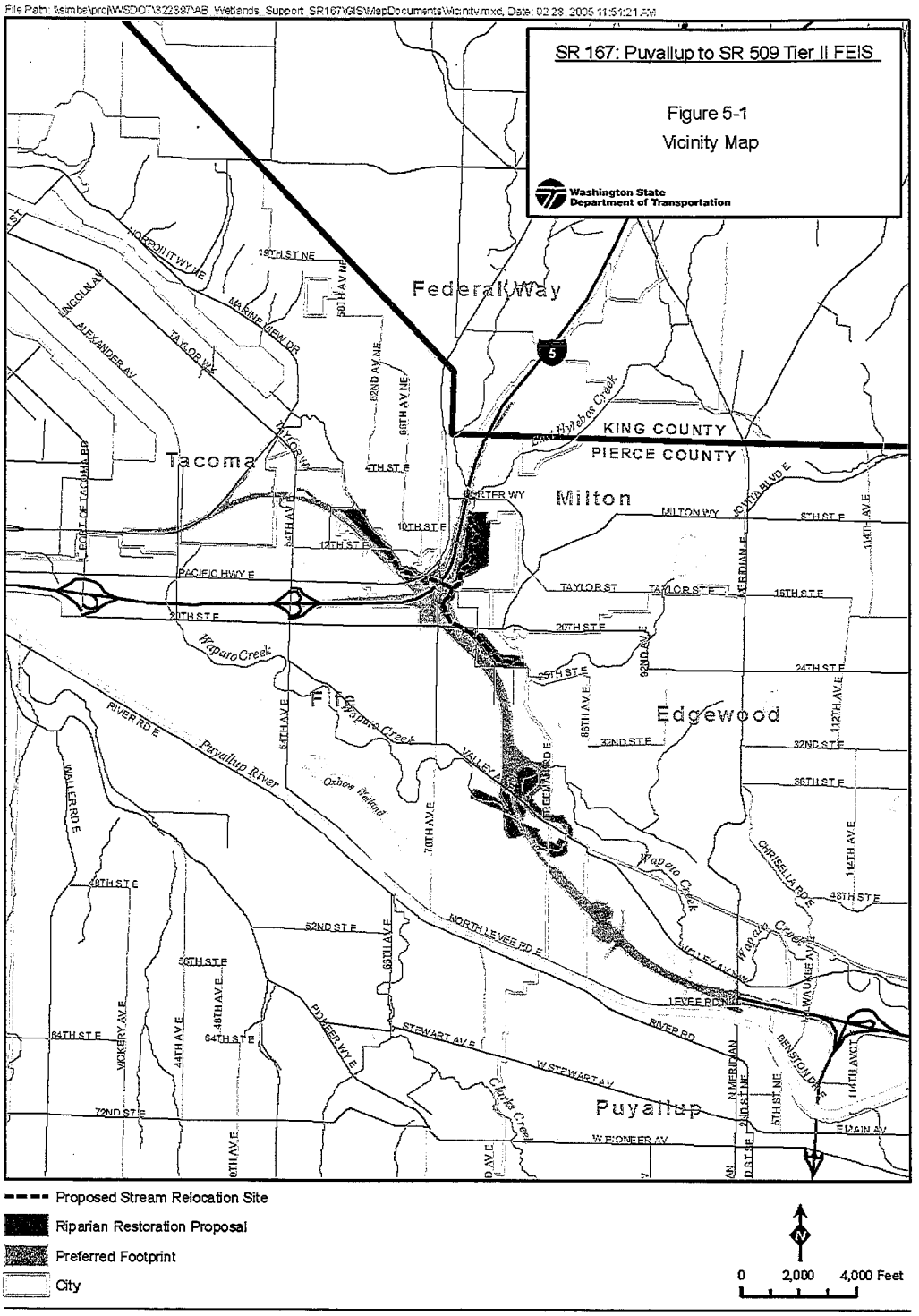
Section 4(f) specifies that "[t]he Secretary [of Transportation] may approve a transportation program or project ... requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State, or local significance (as determined by the Federal, State, or local officials having jurisdiction over the park, area, refuge, or site) only if -

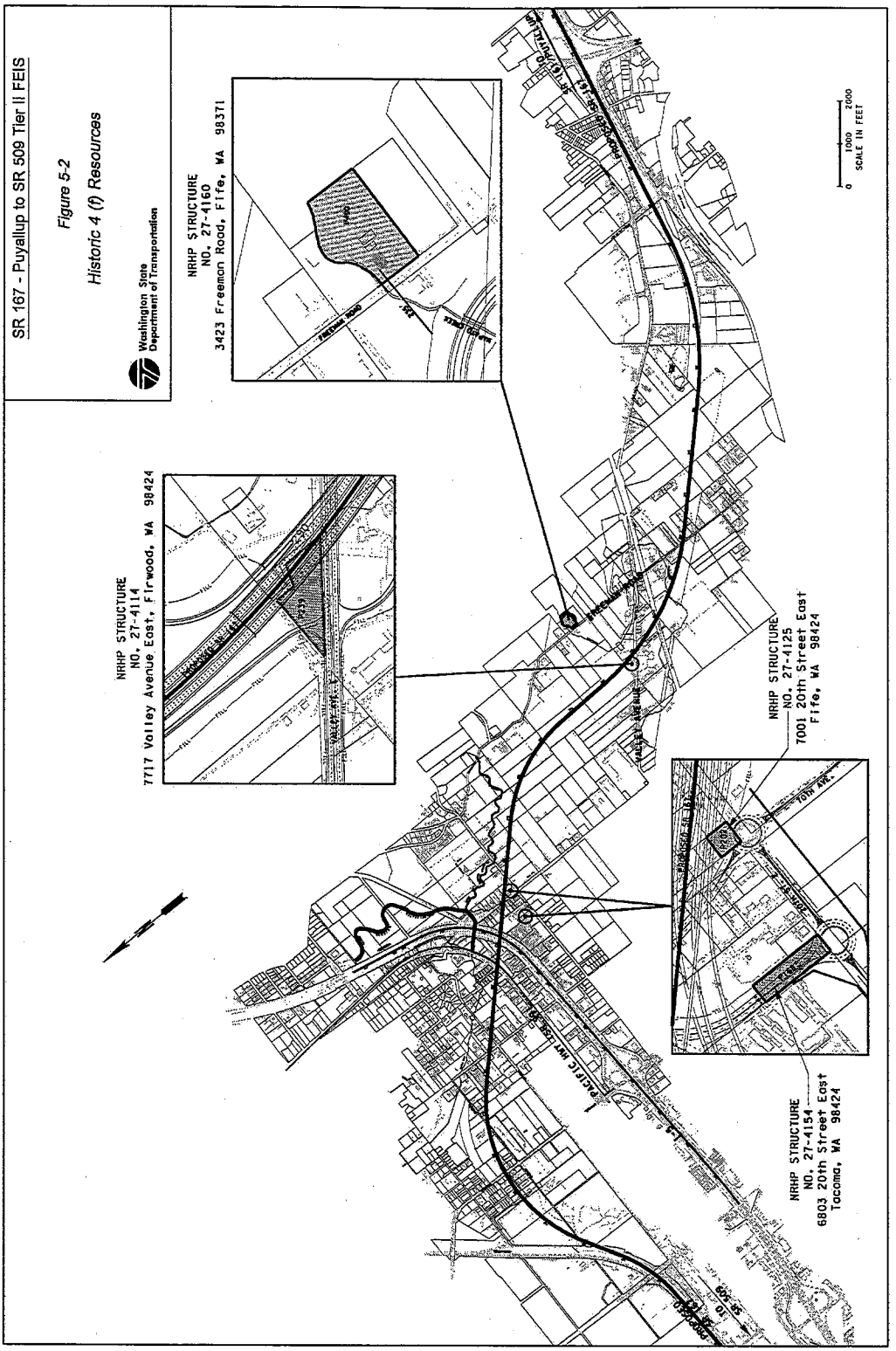
1. There is no feasible and prudent alternative to using that land.

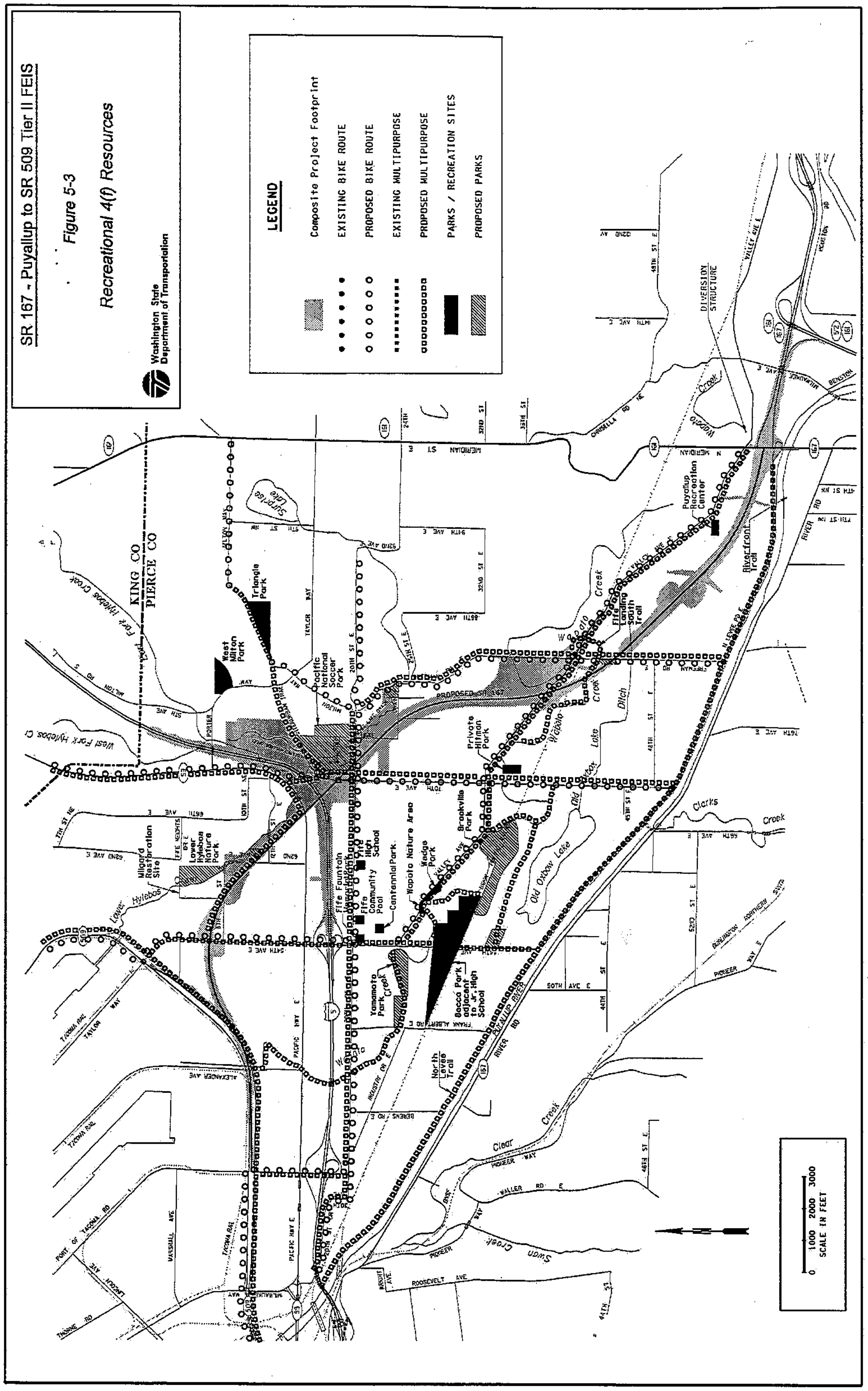
2. The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use."

"Use" of a Section 4(f) property is usually considered to occur when land from a 4(f) resource is permanently incorporated into a transportation facility or when there is a temporary occupancy of land from a 4(f) resource which results in an adverse effect upon the resource contrary to the Section 4(f) statutory intent to preserve these properties. However, use of a Section 4(f) resource is not limited to property or easement acquisition under the statute.

"Constructive use" under Section 4(f) is defined as project proximity impacts (e.g. noise, access, vibration, aesthetic, ecological intrusion) which are so severe that they "substantially impair" or diminish the activities, features, or attributes that qualify a resource for protection under section 4(f). FHWA has determined that the threshold for constructive use is proximity impacts which substantially impair the function, integrity, use, access, value or setting of a park, recreation area, waterfowl or wildlife refuge, or historic site.


File Path: \\simbe\proj\WSDOT\322387\AB Wetlands Support SR167\GIS\MapDocuments\Vicinity.mxd, Date: 02.28.2005 11:51:21 AM
SR 167: Puyallup to SR 509 Tier II FEIS
Figure 5-1
Vicinity Map
Washington State Department of Transportation
Federal Way
Tacoma
Milton
Fife
Edgewood
Puyallup
KING COUNTY
PIERCE COUNTY
Hylebos Creek
Wapato Creek
Puyallup River
Oxbow Wetland
Clarks Creek
Proposed Stream Relocation Site
Riparian Restoration Proposal
Preferred Footprint
City
0 2,000 4,000 Feet


SR 167 - Puyallup to SR 509 Tier II FEIS
Figure 5-2
Historic 4 (f) Resources
Washington State Department of Transportation
NRHP STRUCTURE NO. 27-4160 3423 Freeman Road, Fife, WA 98371
NRHP STRUCTURE NO. 27-4114 7717 Valley Avenue East, Firwood, WA 98424
NRHP STRUCTURE NO. 27-4125 7001 20th Street East Fife, WA 98424
NRHP STRUCTURE NO. 27-4154 6803 20th Street East Tacoma, WA 98424
SCALE IN FEET
0
1000
2000


SR 167 - Puyallup to SR 509 Tier II FEIS
Figure 5-3
Recreational 4(f) Resources
Washington State Department of Transportation
LEGEND
Composite Project Footprint
EXISTING BIKE ROUTE
PROPOSED BIKE ROUTE
EXISTING MULTIPURPOSE
PROPOSED MULTIPURPOSE
PARKS / RECREATION SITES
PROPOSED PARKS
0 1000 2000 3000
SCALE IN FEET

Supporting information must demonstrate that there are unique problems or unusual factors involved in the use of alternatives that avoid use of 4(f) resources or that the cost, social, economic, and environmental impacts, or community disruption resulting from such alternatives reach extraordinary magnitudes or result in unique problems.

Section 4(f) further requires consultation with the Department of the Interior and, as appropriate, the involved offices of the Departments of Agriculture and Housing and Urban Development in developing transportation projects and programs which use lands protected by Section 4(f).

5.1.2 Section 6(f) Resources

Recreation resources that are acquired or improved with Land and Water Conservation Fund monies are also protected under Section 6(f) of the Land and Water Conservation Fund Act as stated in the FHWA Technical Advisory T6640.8A:

Section 6(f) directs the Department of the Interior (National Park Service) to assure that replacement lands of equal value, location, and usefulness are provided as conditions to approval of land conversions. Therefore, where a Section 6(f) land conversion is proposed for a highway project, replacement land will be necessary. Regardless of the mitigation proposed, the draft and final Section 4(f) evaluations should discuss the results of coordination with the public official having jurisdiction over the Section 4(f) land and document the National Park Service's position on the Section 6(f) land transfer, respectively.

There are no Section 6(f) resources impacted by this project.

5.2 Description of the Proposed Action

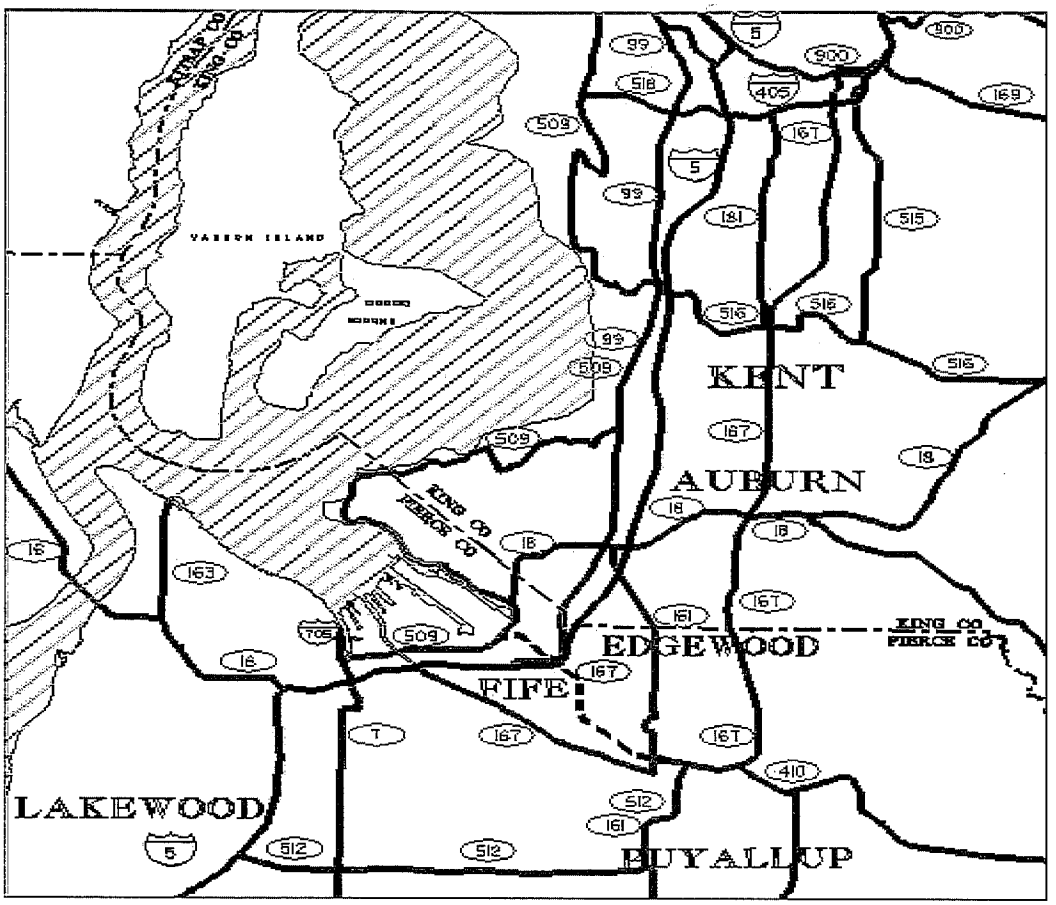
5.2.1 Project Background

In the 1950's, a regional highway plan was developed which included SR 167 from Renton to I-5. After issuance of a Design Report and Access Report, work on the project in the Puyallup Valley was halted in the late 1970's because of uncertainty regarding ownership of the Puyallup Tribal lands in the area. In the late 1980's the SR 167 freeway was completed from I-405 in Renton to SR 512 in Puyallup. The tribal ownership issue was resolved in 1989, allowing the SR 167 extension planning to move forward. In 1990 the Washington State Legislature provided funds for the completion of the SR 167 project.

At the beginning of the EIS preparation in 1990, FHWA and WSDOT decided to tier the EIS process into two steps as permitted in the federal guidelines under the National Environmental Policy Act (NEPA). The Tier I EIS would evaluate different corridor options and select a preferred corridor and interchange locations. The Tier II EIS would result in selection of a preferred design and evaluation of interchange options within the selected corridor. In both cases, the selection process involved evaluating the environmental consequences of

different alternatives and identifying ways to avoid, minimize, or mitigate the environmental impacts.

Regional Freeway Network



NEPA regulations at 23 CFR §771.135(o) address the analysis required by Section 4(f) in a tiered EIS:

> (1) When the first-tier, broad-scale EIS is prepared, the detailed information necessary to complete the section 4(f) evaluation may not be available at that stage in the development of the action. In such cases, an evaluation should be made on the potential impacts that a proposed action will have on section 4(f) land and whether those impacts could have a bearing on the decision to be made. A preliminary determination may be made at this time as to whether there are feasible and prudent locations or alternatives for the action to avoid the use of section 4(f) land. This preliminary determination shall consider all possible planning to minimize harm to the extent that the level of detail available at the first-tier EIS stage allows. It is recognized that such planning at this stage will normally be limited to ensuring that opportunities to minimize harm at subsequent stages in the development process have not been precluded by decisions made at the first-tier stage. This preliminary determination is then incorporated into the first-tier EIS.

(2) A section 4(f) approval made when additional design details are available will include a determination that: (i) The preliminary section 4(f) determination made pursuant to paragraph (o)(1) of this section is still valid; and (ii) The criteria of paragraph (a)[1] of this section have been met.

5.2.2 Tier I FEIS and ROD

Development of the Tier I Draft EIS began in 1990 with a public review process. The Tier I EIS evaluated three corridors and a no build alternative after initially considering seven preliminary alternative corridor locations. The Tier I Draft EIS was published in June of 1993 and a public hearing was held on July 15, 1993. Subsequently, FHWA required WSDOT to prepare a Major Investment Study (MIS), completed in October 1995, which evaluated the effectiveness of four alternatives. The three corridor alternatives presented in the Tier I EIS avoided then identified 4(f) resources. Alternative 2 had the best mix of features for avoiding, minimizing, and mitigating environmental impacts while still meeting the purpose and need for the project. Therefore, Alternative 2 was selected as the preferred corridor in the Tier I Final EIS and was the basis for the Build Alternative studied in the Tier II Draft EIS. The Tier I Final EIS was published in April 1999 and the Record of Decision was issued by FHWA in June 1999.

5.2.3 Tier II DEIS

The Tier II Environmental Impact Statement (EIS) continues the environmental review process begun in Tier I under both NEPA and the State Environmental Policy Act (SEPA). The Tier II Draft EIS was circulated for public review in February 2003. It included the complete description of the proposed facility and the resulting impacts to cultural resources and the environment, conceptual mitigation plans resulting from those impacts, and identified all necessary environmental permits. Copies of the Tier II Draft EIS are available for review at local libraries or by request from the Washington State Department of Transportation.

One prehistoric site and four Craftsman style homes eligible for the National Register of Historic Places (NRHP) were identified in the Tier II Draft EIS. Subsequent to public review, it was determined that additional analysis of the corridor was necessary. Elements of the project, such as a proposed wetland mitigation site (comprising of approximately 200 acres) and areas for the proposed Park and Ride facilities were researched and one additional historic property, a dairy farm, was identified. On June 15, 2004, the Office of

[1] 23 C.F.R. 771.135(a)(l) The Administration may not approve the use of land from a significant publicly owned public park, recreation area, or wildlife and waterfowl refuge, or any significant historic site unless a determination is made that:
(i) There is no feasible and prudent alternative to the use of land from the property; and
(ii) The action includes all possible planning to minimize harm to the property resulting from such use.
(2) Supporting information must demonstrate that there are unique problems or unusual factors involved in the use of alternatives that avoid these properties or that the cost, social, economic, and environmental impacts, or community disruption resulting from such alternatives reach extraordinary magnitudes.

update for final

Archeological and Historic Preservation (OAHP) concurred that 64 surveyed resources are not eligible for the NRHP, and 5 historical resources and 1 archeological site were determined to be eligible for the NRHP. Those historical 4(f) resources are described in this draft Section 4(f) evaluation.

This Draft Section 4(f) Evaluation was circulated as a separate, stand alone, document.

5.2.4 Purpose and Need

The purpose of the proposed project is to

- improve regional mobility of the transportation system;
- serve multimodal local and port freight movement and passenger movement between the Port of Tacoma, the new SR 509 freeway, and the I-5 corridor and the Puyallup termini of SR 167, SR 410, and SR 512;
- reduce congestion and improve safety;
- provide improved system continuity between I-5 and the SR 167 corridor;
- maintain or improve air quality in the corridor to ensure compliance with the current State Implementation Plan (SIP) and all requirements of the Clean Air Act (CAA).

The existing non-freeway segment of SR 167 from I-5 to the Puyallup area is on surface streets and includes a circuitous route through Puyallup, via River Road and North Meridian. The high levels of congestion at intersections and the frequency of intersecting driveways contribute to relatively high accident ratios compared to statewide averages. Traffic projections for the year 2030 indicate the capacity problems at intersections will increase if action to complete the freeway is not taken.

Trucks transporting freight currently travel through the City of Fife via Valley Avenue East, 70th Avenue East, and 54th Avenue East, or climb existing steep grades on SR 18 near I-5. Several intersections along these routes operate at over-capacity conditions during peak traffic, resulting in traffic delays and congestion. The Port of Tacoma projected truck traffic to and from the Port to double from 300,000 to 600,000 trucks per year by the year 2014 (Tier I EIS, 1999). Anticipated problems include more congestion-related delays in freight transport and incompatibility of heavy truck use on residential surface streets creating unsafe conditions.

5.3 Alternatives and Options

Several corridor alternatives and a no action alternative were evaluated in the Tier I EIS. Corridor 2, which was selected as the preferred alternative, provided a corridor within which a new limited access freeway connecting SR 509 to SR

167 near Puyallup and interchanges at I-5 and Valley Avenue could be configured.

The Tier II EIS proposes two alternatives, a no build and a build alternative.

5.3.1 No Build Alternative

Under the "no build" alternative, the SR 167 freeway will terminate at North Meridian (SR 161), and the non-freeway SR 167 will continue to I-5 via North Meridian and River Road where it will terminate at the Portland Avenue/Bay Street interchange in Tacoma. The corridor would remain in the present state except for minor improvements and maintenance. Hylebos Creek and Surprise Lake Drain will not be relocated. Riparian restoration will not occur on Hylebos Creek, Surprise Lake Drain, or Wapato Creek. Pierce County and the Cities of Fife, Tacoma, Puyallup, Milton, and Edgewood will continue with their programmed and planned improvements to the local transportation system. SR 167 Tier II DEIS Section 3.14, Transportation, identifies some of the roadway projects that are planned. The types of projects include widening roads, signalizing intersections, adding bicycle and pedestrian facilities, developing park and ride facilities, and improving capacity.

WSDOT will also continue making improvements to its facilities in the study area under the No Build Alternative. These facilities include SR 509, SR 705, SR 99, SR 161, SR 512, and the existing SR 167. The types of improvements include adding HOV lanes, adding collector/distributor lanes, improving on and off ramps, adding transportation demand management systems, and upgrading drainage systems.

5.3.2 Build Alternative

The build alternative consists of a four-lane freeway (four general purpose lanes) with two HOV lanes between I-5 and SR 161. The build alternative includes freeway-to-freeway connections with SR 509, SR 167, and I-5. Also, it includes new local access interchanges at 54th Avenue East and Valley Avenue and completion of the SR 161 interchange. As part of the SR 161 interchange, the existing eastern bridge over the Puyallup River will be replaced and the existing western bridge will be widened. The Build Alternative also results in the relocation of a part of Hylebos Creek and Surprise Lake Drain. The relocated channel designs will reduce flooding and improve fish and wildlife habitat. A riparian restoration area is proposed for existing Hylebos Creek between SR 99 and 8th Avenue, for the relocated Hylebos Creek and Surprise Lake Drain east of I-5, and at Wapato Creek near Freeman Road and Valley Avenue.

A conceptual stormwater treatment plan has been developed for the project.

Mainline Description

The proposed SR 167 begins as a four-lane limited access highway where it connects to the existing SR 509 at the Port of Tacoma Road/SR 509 Interchange. The location of the connection and design features are dictated by the location of SR 509 and the SR 167 alignment as approved in the Tier I EIS. The two-lane

southbound SR 167 will directly connect to the southbound lane of SR 509. The two-lane northbound SR 509 will directly connect to the two-lane northbound SR 167. There will be single-lane ramps from southbound SR 167 to SR 509 North Frontage Road and from northbound SR 167 to SR 509 South Frontage Road.

If necessary, as part of the SR 509 connection, one new bridge over Alexander Avenue will be built. This bridge will span Wapato Creek and the South Frontage Road. The existing railroad crossing of SR 509 will be relocated. A new railroad bridge over Wapato Creek will be constructed south of the South Frontage Road. A new structure (potentially a bridge or three-sided culvert) will replace the existing 110-foot-long by 8-foot-diameter open bottom arched culvert over Wapato Creek on North Frontage Road.

The four-lane mainline alignment continues easterly on embankment until it crosses 54th Avenue East in the vicinity of 8th Street East. An interchange providing access to and from the east is proposed at 54th Avenue East. Two interchange options were developed and are discussed below. The mainline continues on an embankment from 54th Avenue East until just past 8th Street East where the mainline separates and northbound lanes ascend on an elevated structure while southbound lanes remain on embankment until after crossing 12th Street East. Local access is maintained as mainline SR 167 crosses 12th Street East on structure.

Both northbound and southbound lanes cross SR 99 on separate elevated structures continuing on to the freeway-to-freeway connection with I-5. The archeological site is in the vicinity of these structures.

Bridges over 54th Avenue East and 12th Street East will be constructed. An existing culvert at the 12th Street East crossing of Hylebos Creek will be replaced with a structure. Riparian restoration along Hylebos Creek will also occur. It will include the removal of residential and commercial buildings near 8th Street East and 62nd Avenue East, the removal of 8th Street East and 62nd Avenue East, east of the new alignment, and the relocation of a drainage ditch. The proposed Lower Hylebos Nature Park, as shown on Figure 5-3, is in the vicinity of the proposed riparian restoration area and the existing Milgard Restoration Site.

Due to complexity of I-5 interchange and limited solutions for these freeway-to-freeway connections, only one design option could be developed to reasonably meet the needs at this location. The interchange will consist of three elevated levels of roadway structures extending up to 80 feet above ground. The SR 167 mainline would be elevated on structure over 12th Street East, Pacific Highway (SR 99), Interstate 5, proposed relocated 20th Street East and 70th Avenue East. Two historic residences are in the vicinity of the proposed changes to existing 20th Street East and 70th Avenue East.

Hylebos Creek will be relocated as part of mitigation for the fill of Hylebos Creek due to improvements to I-5. The creek will be relocated to the field east of I-5 from its current location adjacent to I-5. Relocation will begin where the creek enters the current I-5 Right Of Way upstream from the proposed interchange and will extend downstream to where it passes underneath SR 99, approximately 4,010 linear feet of channel.

A riparian restoration plan has been developed as part of the project's conceptual stormwater treatment plan that will provide a riparian buffer area around the existing and relocated Hylebos Creek. It will also provide a separated non-motorized path from 54th Avenue East to SR 99. The required 200- to 400-foot stream channel and riparian buffer area intersects with and is adjacent to Interurban Trail and the planned Pacific National Soccer Park.

Surprise Lake Drain will also be relocated as part of the I-5 interchange improvements. South of I-5, Surprise Lake Drain will relocated and restored to a more natural alignment. The existing Surprise Lake Drain channel, which currently bisects the planned Pacific National Soccer Park, will be moved to agricultural fields east of the new SR 167 mainline (Figure 5-3).

Riparian restoration, part of the project's conceptual stormwater treatment plan, is proposed along Wapato Creek at Valley Avenue Interchange. Restoration activities include riparian plantings, fill removal, impervious surface removal from the floodplain, and the potential removal of six undersized crossing structures. A trail, the planned Fife Landing South Trail, is currently proposed to follow Wapato Creek in the vicinity of the project's planned restoration activities.

The mainline continues to the southeast parallel with Valley Avenue with two general purpose lanes in each direction and one HOV lane in each direction. Washington State Patrol truck weigh station facilities are proposed for each direction of travel east of the Valley Avenue interchange. The mainline would pass to the south of the Puyallup Recreation Center. WSDOT is proposing another cross connection over SR 167 with the preferred Urban interchange option for SR 161. Three design options have been developed for consideration at this interchange. The mainline continues towards the terminus at the existing SR 161/SR 167 interchange.

There are two existing bridges over the Puyallup River that carry SR 161 traffic. The southbound traffic travels over a concrete structure (eastern bridge) constructed in 1971. The northbound traffic travels over a steel structure (western bridge) constructed in 1951. The concrete bridge has a pier within the ordinary high watermark of the river while the steel bridge spans the river. The steel bridge is approximately 3 feet lower than the concrete bridge. Neither bridge meets current design standards.

As part of the SR 161/SR 167 interchange improvements, the existing steel bridge will removed and replaced with a bridge that may span the Puyallup River. The project currently estimates a maximum of four piers for the new bridge will be located within the ordinary high water mark of the river. The concrete bridge will be widened approximately seven feet to provide shoulders and a bike lane. The Riverfront Trail currently passes under the steel and concrete Puyallup River bridges.

Interchange Descriptions

There are three interchanges with multiple design options under consideration. They are at 54th Avenue East, Valley Avenue, and SR 161 (North Meridian).

54th Avenue East Partial Interchange

There are two options for the partial interchange at this location. In both options, the ramps are single lane and provide only southbound off and northbound on access to SR 167. Connections will be provided for bicycle route continuity. There are no 4(f) resources in the vicinity of this proposed interchange.

Valley Avenue Interchange

Three design options were developed for this interchange location. For each, the SR 167 mainline is elevated over Valley Avenue, Union Pacific Railroad, Wapato Creek, and Freeman Road. Under all three options, WSDOT will widen Valley Avenue from two lanes to five lanes from the northbound off ramp to the intersection of Freeman Road East. There are two historic residences in the vicinity of this proposed interchange.

SR 161 / SR 167 Interchange

An existing connection here provides the southern terminus for the freeway segment of SR 167 between Puyallup and Renton. With the proposed SR 167, this connection will become a full interchange. Three design options have been developed. In each design option, the SR 167 mainline will be elevated over SR 161 (North Meridian). In all three options, the existing steel bridge over the Puyallup River (northbound SR 161) will be replaced. The existing concrete bridge (southbound SR 161) will be widened. There are no 4(f) resources in the vicinity of this proposed interchange.

5.4 Description of Section 4(f) Resources

Section 4(f) resources include historic sites and publicly owned parks, recreation areas, and wildlife and waterfowl refuges. The proposed action will not require the use of any wildlife and waterfowl refuges or existing public parks.

5.4.1 Historic Resources

Historic resources are subject to protection under Section 4(f) regulations if they are on or eligible for listing on the NRHP. Determination of eligibility is made by the Federal Highway Administration (FHWA). ~~FHWA has delegated this authority to the WSDOT.~~ WSDOT made the determinations of eligibility based on recommendations in the Cultural Resources report prepared to satisfy Section 106 requirements (summarized in the EIS). There are four National Register Criteria for Evaluation that an eligibility determination is based on: association with significant events (Criterion A); association with significant people (Criterion B); possession of significant design or construction (Criterion C); and association with information important in prehistory or history (Criterion D).

Section 4(f) applies to all archaeological sites on or eligible for inclusion on the National Register and which warrant preservation in place (including those discovered during construction). Section 4(f) does not apply if FHWA, after consultation with the State Historic Preservation Officer (SHPO) and the ACHP, determines that the archaeological resource is important chiefly because of what can be learned by data recovery (even if it is agreed not to recover the resource) and has minimal value for preservation in place.

The Tier II Draft EIS (pages 3-314, 3-315) described one archaeological site along SR 99 in the vicinity of the I-5 interchange portion of the project as potentially eligible for the NRHP. It also described 56 historic properties that were inventoried, with 5 appearing eligible for the NRHP. At the time the Draft EIS was published in February 2003, eligibility had not yet been determined by the State Historic Preservation Officer (SHPO). Subsequently more sites were surveyed bringing the total to 70, with one additional potentially eligible for the NRHP. SHPO concurred with the agency eligibility determinations. (See Appendix I.)

There is potential for additional archeological sites to be discovered during construction. In this case, where preservation of the resource in place is warranted the Section 4(f) process will be expedited. Also, the evaluation of feasible and prudent alternatives will take account of the level of investment already made. The review process, including the consultation with other agencies should be shortened, as appropriate. An October 19, 1980, memorandum with the Heritage Conservation and Recreation Service (now National Park Service) provides emergency procedures for unanticipated cultural resources discovered during construction.

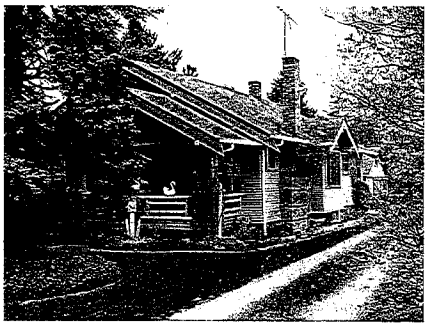
On June 15, 2004, the SHPO concurred that the following resources (Table 5-1) were eligible for listing in the NRHP, therefore making them potentially subject to protection under Section 4(f) regulations:

Table 5-1: Historic Resources Eligible for the NRHP

OAHP[1] Number	Parcel Number[2]	Address	Description
45PI488	(not disclosed)	Along SR 99	Archaeological site
27-4154	P168	6803 20th St. E.	Residence
27-4125	P202	7001 20th St. E.	Residence
27-4114	P239	7717 Valley Ave. E.	Residence
27-4160	P490	3423 Freeman Rd.	Residence
Fife-A-1	(Baggenstos Farm)	N. Levee Rd.	Farmstead

[1]Office of Archaeology and Historic Preservation
[2]Assigned by WSDOT

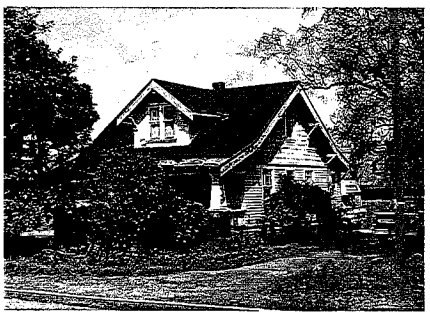
Site 45PI488 - This archaeological site is on a privately owned vacant lot located along SR 99. Based on the results of shovel testing performed in October 2000 and January 2001, the site appears to be confined to the southeast portion of the parcel. Limited testing produced two fragments of a formed tool, a charcoal sample, and lithic scatter. The site is considered significant under Criterion D, for it is likely to yield information important to Puyallup River Valley prehistory. It was determined, after consultation with SHPO, that this site has minimal value for preservation in place. Therefore, the archaeological site is not subject to protection under Section 4(f) regulations. This site is not shown on the vicinity map or a site plan in order to protect its integrity.



Site 27-4154 – This private residence is located at 6803 20th Street East. Built around 1940, this gable-front bungaloid cottage is in excellent condition and retains its architectural integrity. In addition, its gardens and overall setting further enhance its Craftsman aesthetic. It was determined eligible for the NRHP under Criterion C (Figures 5-2 and 5-4).

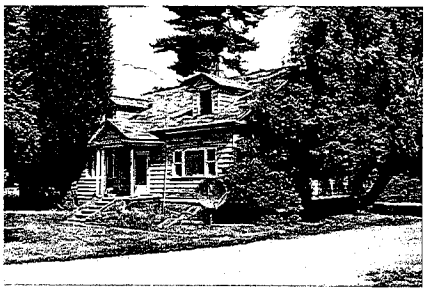
Site 27-4125 – This private residence is located at 7001 20th Street East. It was constructed around 1930, and is a one and one-half story bungalow with a gull-wing dormer and a shed-roof dormer. It retains excellent architectural integrity and is in good to fair

physical condition. It was determined eligible for the NRHP under Criterion C (Figures 5-2 and 5-4).

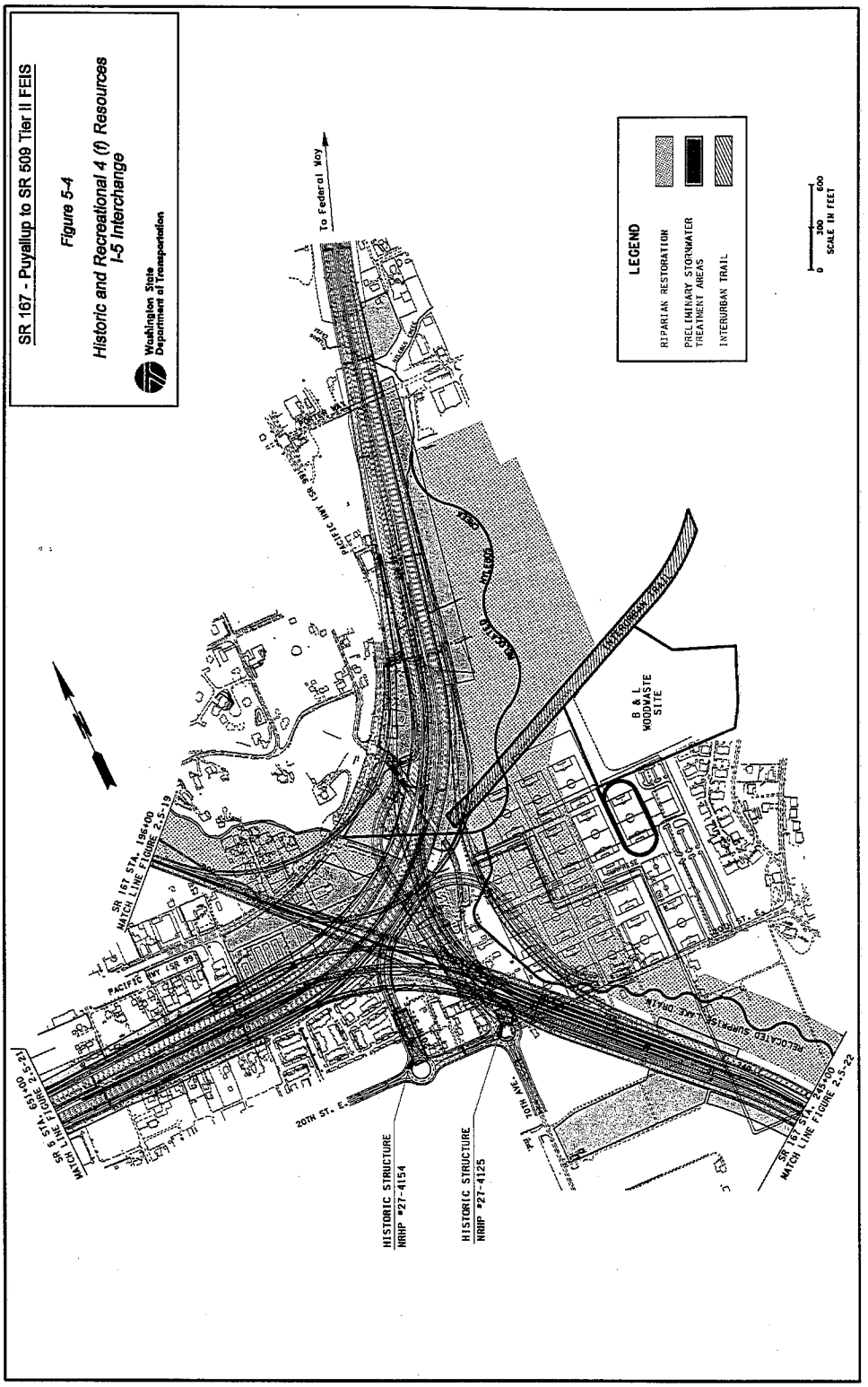


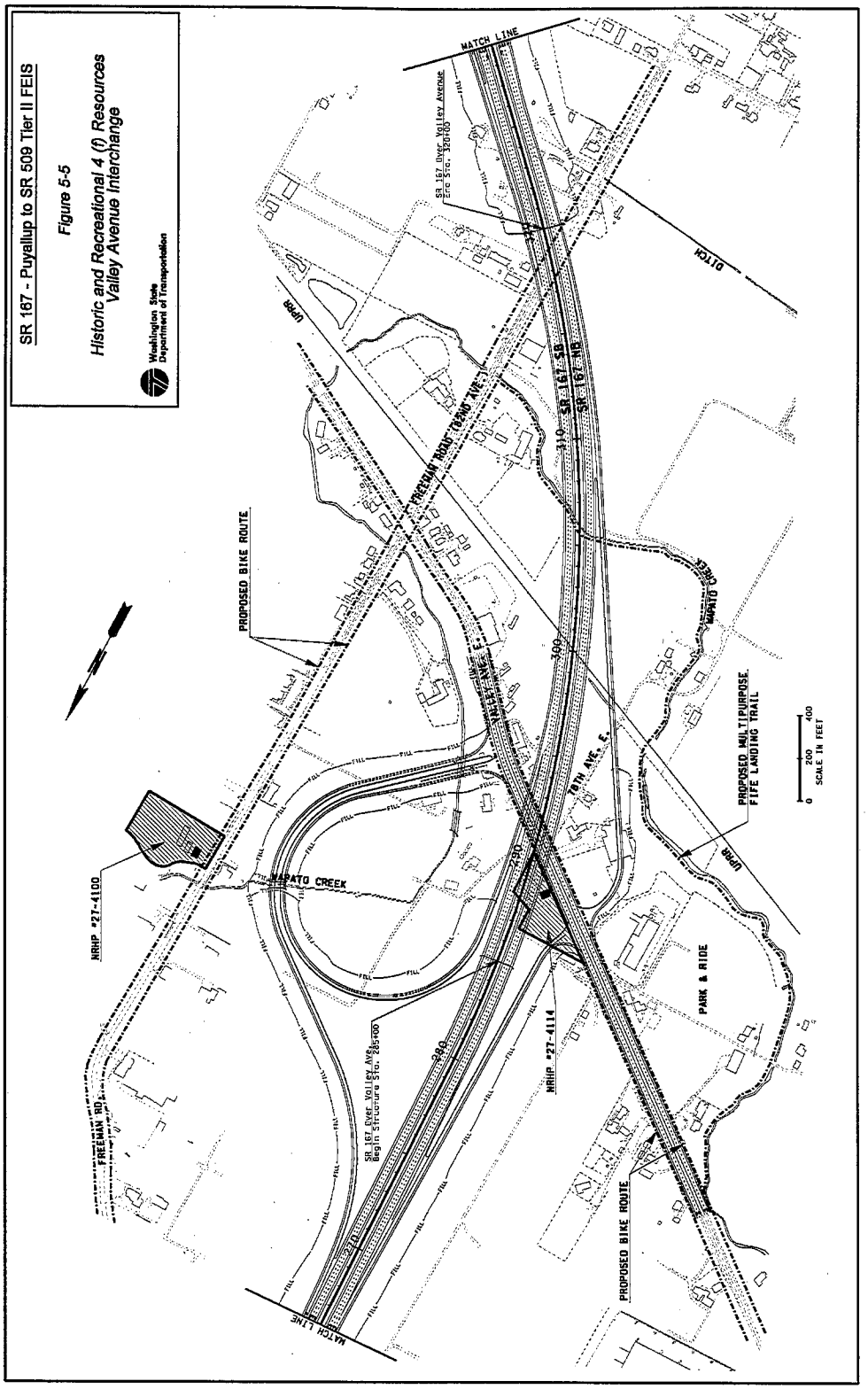
Site 27-4114 – Another private residence, this resource is located at 7717 Valley Avenue E. Built around 1900, this one and one half story bungalow with gull-wing style gable roof has excellent structural integrity, but is in only fair physical condition. It was determined eligible for the NRHP under Criterion C (Figures 5-2 and 5-5).

Site 27-4160 – Built in 1902, this Craftsman style two-story private residence is located at 3423 Freeman Road. It has excellent exterior architectural integrity and is in excellent physical condition. It was determined eligible for the NRHP under Criterion C (Figures 5-2 and 5-5).



Site Fife-A-1 – This property, known as the Baggenstos Farm, is a complex of buildings located at the proposed wetland mitigation site on N. Levee Rd. The buildings, dating to around 1920, include a farmhouse, vehicle garages, and a large barn that adjoins a dairy barn, loafing shed, and milk house. All buildings other than the garages are presently abandoned. The farmhouse retains good integrity of materials and appearance, but has lost its former association with dairy farming. The other buildings have also lost their historic association and function, and exhibit poor integrity. However, this group of buildings still retains a visibly recognizable association with early farming. It was determined eligible for the NRHP under Criterion A.

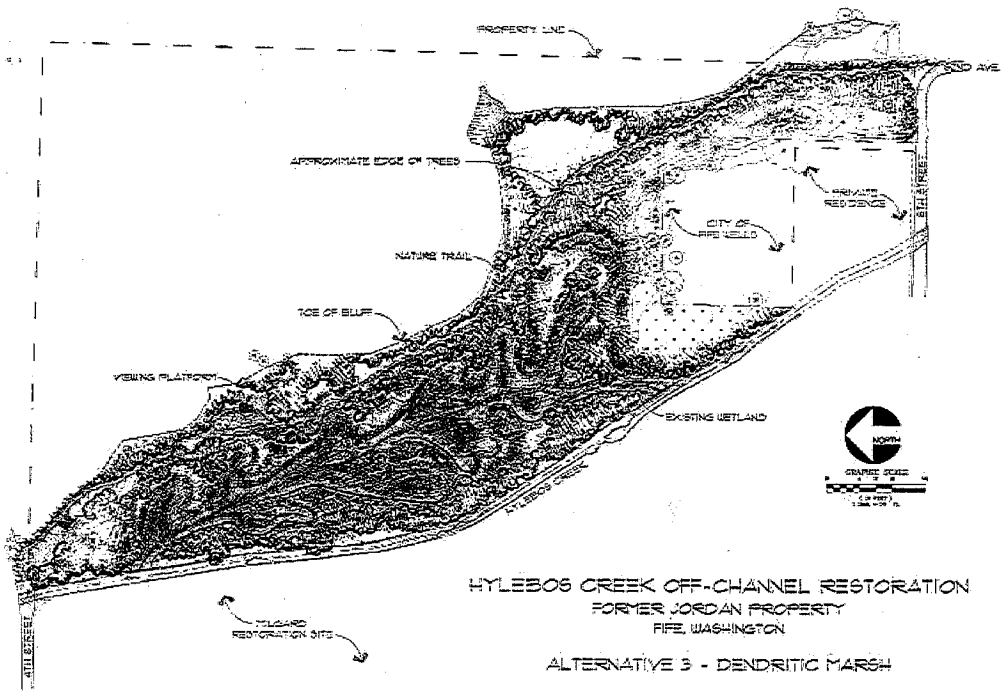

SR 167 - Puyallup to SR 509 Tier II FEIS
Figure 5-4
Historic and Recreational 4 (f) Resources
I-5 Interchange
Washington State Department of Transportation
LEGEND
RIPARIAN RESTORATION
PRELIMINARY STORMWATER TREATMENT AREAS
INTERURBAN TRAIL
0 300 600
SCALE IN FEET
To Federal Way
PACIFIC HWY (SR 99)
B & L WOODWASTE SITE
SR 167 STA. 195+00 MATCH LINE FIGURE 2.5-19
SR 167 STA. 251+00 MATCH LINE FIGURE 2.5-21
SR 167 STA. 247+00 MATCH LINE FIGURE 2.5-22
20TH ST. E.
70TH AVE.
HISTORIC STRUCTURE NRHP #27-4154
HISTORIC STRUCTURE NRHP #27-4125


SR 167 - Puyallup to SR 509 Tier II FEIS
Figure 5-5
Historic and Recreational 4 (f) Resources
Valley Avenue Interchange
Washington State Department of Transportation
MATCH LINE
SR 167 Over Valley Avenue Eng Sta. 320+00
DITCH
UPRR
FREEMAN ROAD (SR 161)
SR 167 SB
SR 167 NB
PROPOSED BIKE ROUTE
WAPATO CREEK
40TH AVE. E.
PROPOSED MULTIPURPOSE FIFE LANDING TRAIL
0 200 400
SCALE IN FEET
NRHP #27-4100
WAPATO CREEK
SR 167 Over Valley Ave Begin Structure Sta. 286+00
NRHP #27-4114
PARK & RIDE
FREEMAN RD.
PROPOSED BIKE ROUTE
MATCH LINE

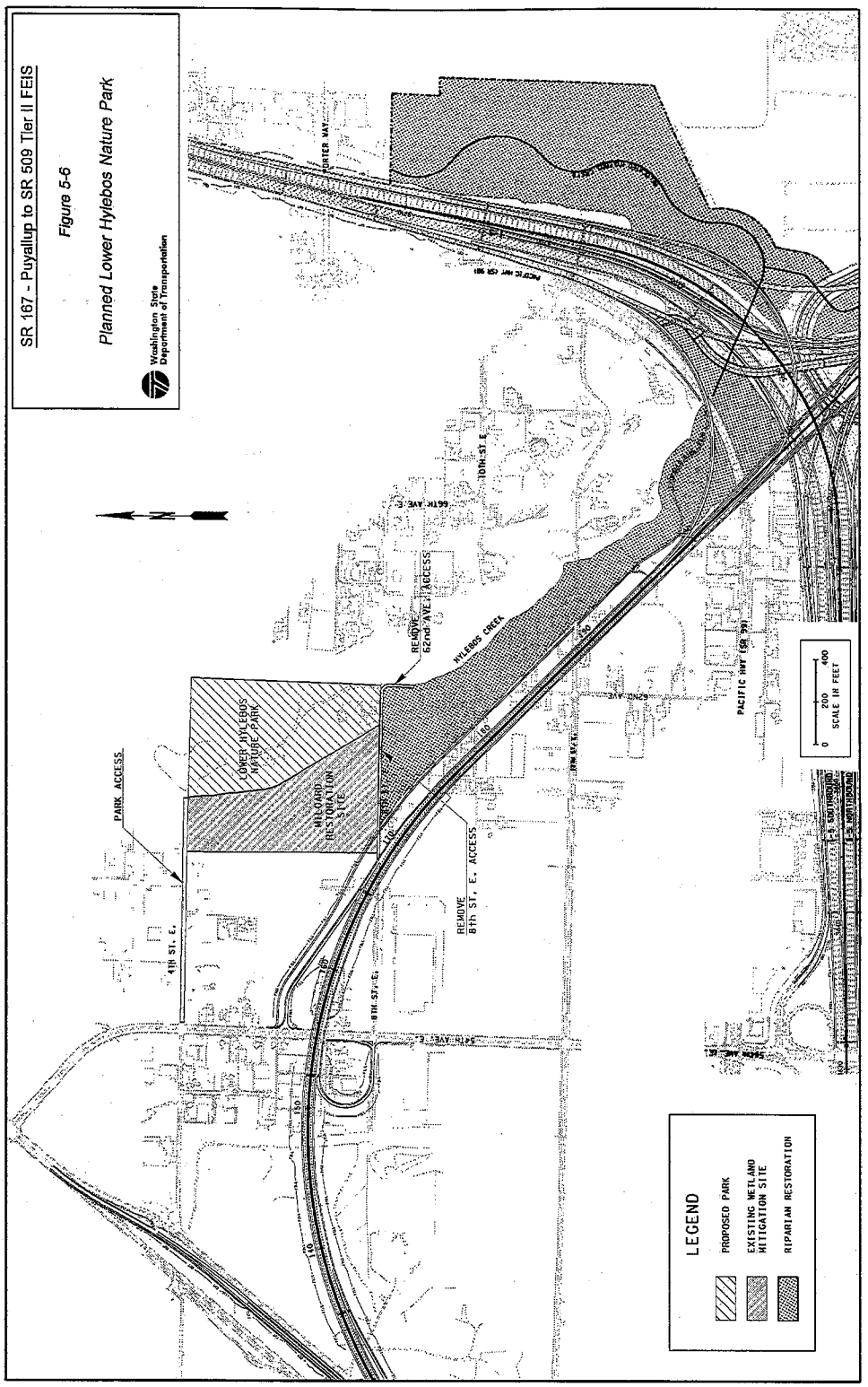
5.4.2 Recreational Resources

The Tier II Draft EIS described the existing and proposed parks and recreation facilities in the study area. Since publication of the DEIS the following resources have been proposed or identified within the project corridor.

Lower Hylebos Nature Park – The City of Fife, together with the Commencement Bay Natural Resources Trustees, Pierce County, and the National Oceanic and Atmospheric Administration (NOAA), have a proposal to design and construct a restoration project adjacent to a tidally influenced reach of Hylebos Creek. The City of Fife owns the site and development of the site is limited to the usable 7 acres of a 15.3-acre parcel, the remainder being steep cliffs. The proposed restoration project will create off-channel habitat for juvenile salmonids and native plant vegetation. The 4(f) recreational resource is the nature trail, including viewing platforms and interpretive signs, that will be added to provide public access and educational opportunities, and, when completed, will be part of the City of Fife's park system.



NOAA is the lead agency for construction at this site, projected to begin in the summer of 2005. The City of Fife will operate and maintain the site after completion of construction. The 2005 construction program will include parking at the south entrance, near the intersection of 62nd Avenue and 8th Street East (Figure 5-6).


SR 167 - Puyallup to SR 509 Tier II FEIS
Figure 5-6
Planned Lower Hylebos Nature Park
Washington State Department of Transportation
PARK ACCESS
4TH ST. E.
LOWER HYLEBOS NATURE PARK
MITIGATION RESTORATION SITE
REMOVE 62nd AVE. ACCESS
HYLEBOS CREEK
REMOVE 8th ST. E. ACCESS
8TH ST. E.
70TH ST. E.
PACIFIC HWY (SR 99)
SCALE IN FEET
0
200
400
LEGEND
PROPOSED PARK
EXISTING WETLAND MITIGATION SITE
RIPARIAN RESTORATION

Planned Pacific National Soccer Complex - As early as the year 2000, the City of Fife developed plans for a city owned and run soccer facility. This planned facility would include, at a minimum, 12 lighted soccer fields, training facilities, a specially surfaced field for players with mental or physical disabilities, a headquarters for the Washington State Youth Soccer Association, and 500 to 600 parking spaces. Several locations were analyzed, including a site off North Levee Road and the preferred location on the east side of I-5, just north of 20th Street East and east of 70th Avenue East. The development of this complex is a joint project of Fife, the Washington Youth Soccer Association, and the Tacoma-Pierce County Junior Soccer Association. The city currently owns the preferred site, and the associations will build the facilities. Pierce County has partnered with both the City of Fife and the City of Milton to provide parking for both this planned facility and the planned improvements to the Interurban Trail, described below. Funding for this project is contingent on providing the minimum of 12 fields.

The city initially purchased a 41-acre site off North Levee Road in March of 2001. The North Levee Road site is outside of the project footprint. Further analysis performed by the City of Fife of the site determined that the original land was too costly to develop and too remote from the city commercial district and I-5. The estimated cost of utility extension and access improvements was $8 million. The city is currently evaluating offers for the sale of this property, and the property was analyzed in the *SR 167 Conceptual Mitigation Plan*, June 2004, as an alternative wetland mitigation site.

The preferred 54-acre site adjacent to I-5 was identified by the city in late 2002. Initial plans were presented to the public in June 2003 and showed a combination of turf and grass soccer fields on three levels along with associated buildings and parking (Figure 5-4.) Located next to flood-prone Hylebos Creek, the site will be tiered to accommodate flood control. The lower level would flood often during the winter during off-season. The second level would also flood but not as frequently, and the third level, turf fields, would remain dry. The proponents have purchased the property, hired a design firm, and are hoping to begin phased construction as early as 2006.

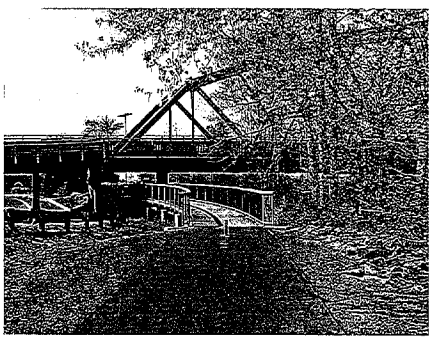
As a planned facility there is no current usage, but the City of Fife has estimated as high as 50,000 families per month will access the site once operational and open to the public. The soccer complex site is also adjacent to the southern terminus of the planned Interurban Trail, described below.

Planned Interurban Trail – The City of Milton purchased the abandoned Puget Sound Electric railbed as a multi-use bicycle / pedestrian trail route, and has hired a consultant to develop it. They hope to begin construction on a 10- to 12-foot paved path with 2-foot gravel shoulders in 2006. This 33-acre trail begins by I-5 north of 20th Street East and east of 70th Avenue East, adjacent to the City of Fife's planned Pacific National Soccer complex, and proceeds northeasterly for approximately three miles (Figures 5-4 and 5-7).

As a planned facility, there is no estimate of the number of users per year. Construction would be in three phases, potentially starting near the proposed I-5 interchange for the SR 167 project

This property will be improved using Washington Wildlife and Recreation Program Funding administered under the Washington State Office of the Interagency Committee (IAC)[2]. By IAC policy, should a sponsor (the City of Milton) convert any portion of the project to a non-recreational use, that conversion must be approved by IAC. The conversion policy can be found in IAC Manual 7 Funded Projects, page 10, March 17, 2004.

If a portion of the trail will be converted, the City would be required to replace what was converted at their own cost with a replacement of equivalent recreational value, location, and use. Depending on the size of the conversion, it may require IAC Board approval. The City would be required to go through the conversion process as outlined in the manual listed above. To briefly summarize the process, all alternatives to the conversion must be considered. There must be justification to support the proposed replacement, as well as site plans for the conversion site and proposed replacement site.

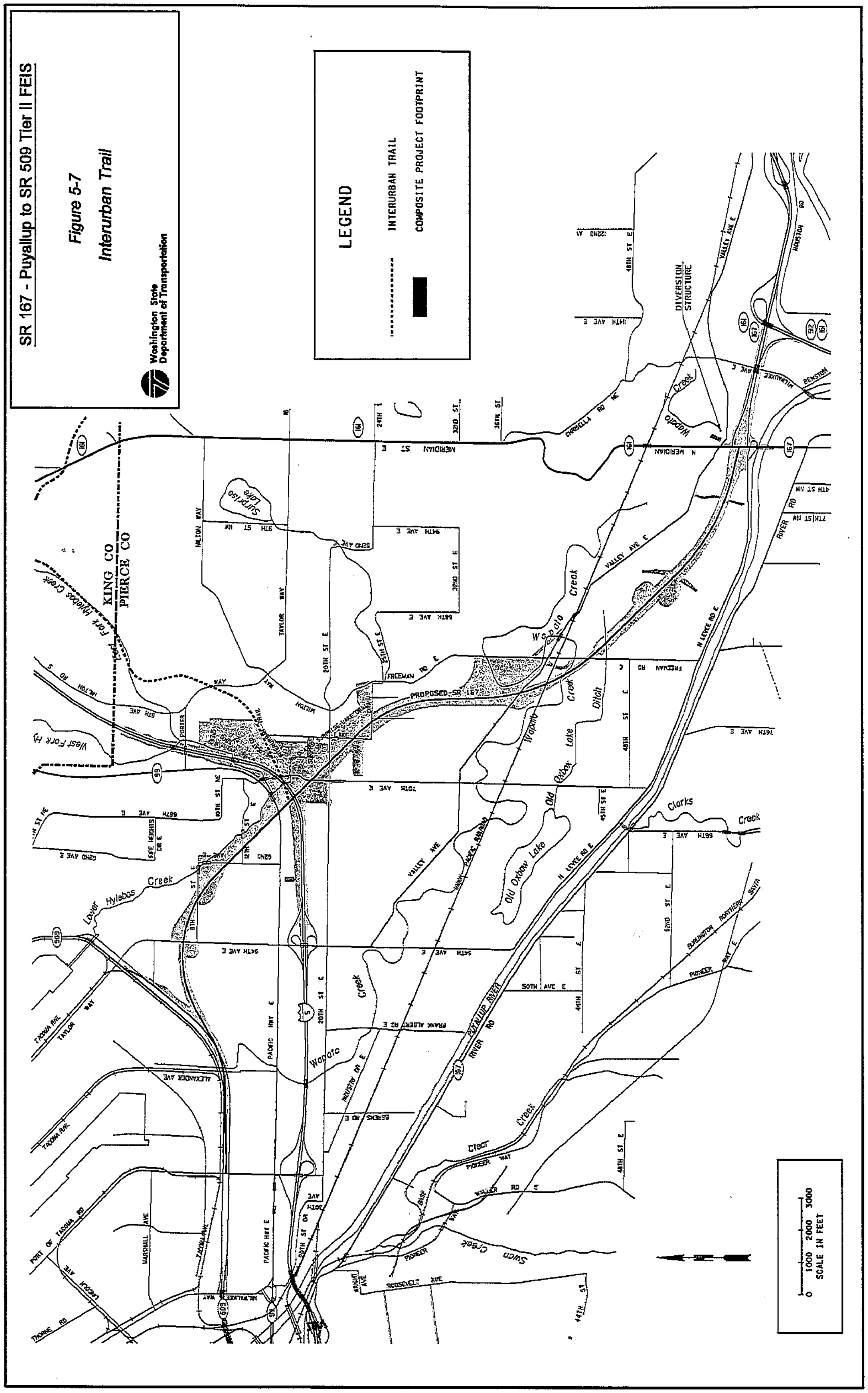


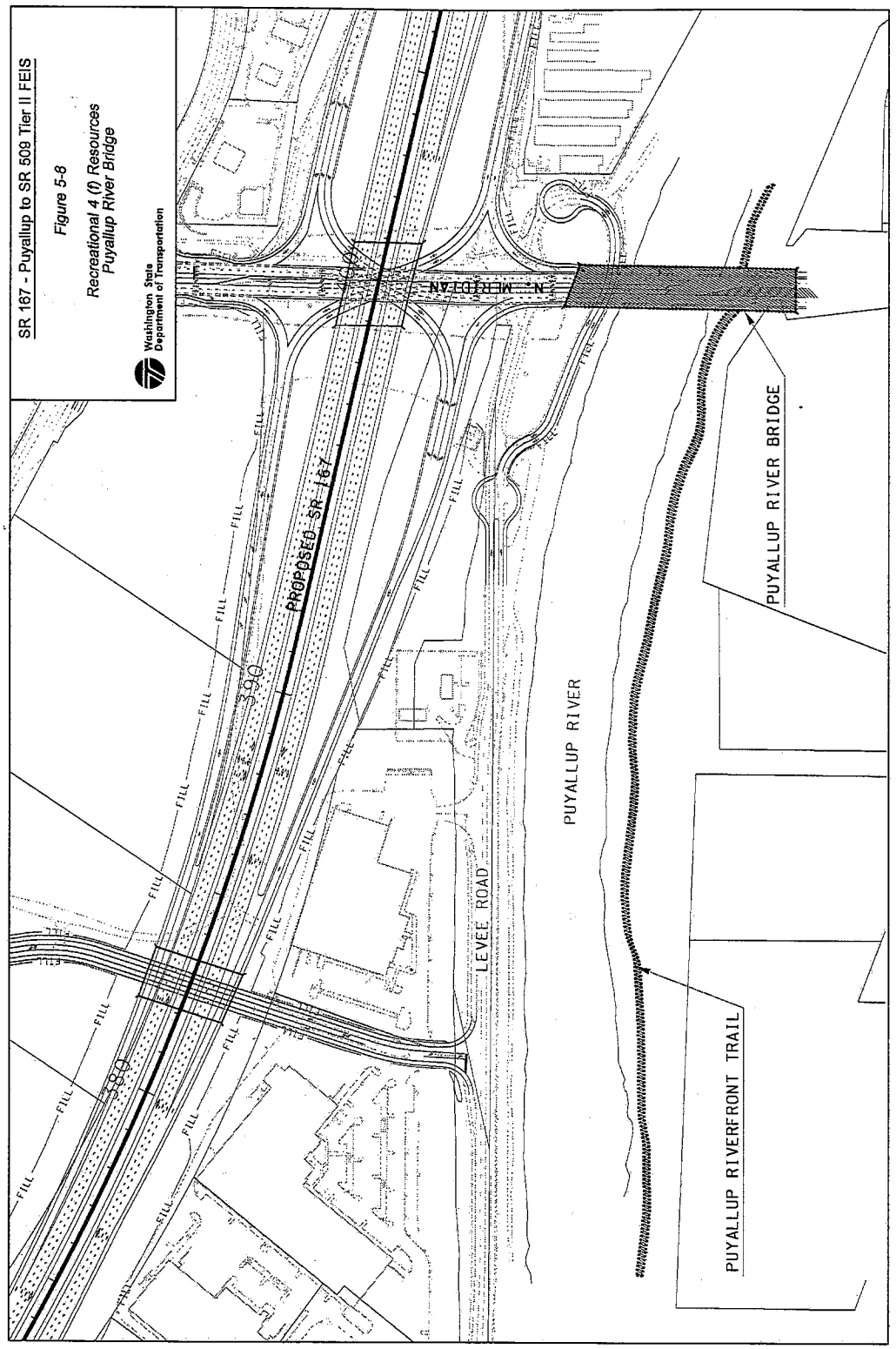
Riverfront Trail –This existing City of Puyallup multi-use trail extends along the south levee of the Puyallup River from the Milwaukee Avenue Bridge westward to the vicinity of 4th St. NW. It is 10 to 12 feet wide, paved, and passes beneath the two SR 167 Puyallup River bridges on its own structure. Current usage is estimated at 20 persons per day (Figure 5-8).

Planned North Levee Trail –This planned City of Fife trail is shown in the Comprehensive Parks, Recreation, and Open Space Plan as located on North Levee Road, extending from Freeman Road northwest to the I-5 bridge over the Puyallup River with a connection to 20th Street East. Trails on transportation rights-of-way are not usually subject to Section 4(f) protection, but as a planned facility some parts of the trail may extend beyond the public street system. Portions of the trail that are proposed along Wapato Creek could be subject to Section 4(f) protection (Figure 5-3).

Puyallup Recreation Center – The recreation center consists of two adjacent facilities, a 25,000-square-foot indoor recreation center, and a 16-acre park with three multi-use softball/baseball fields and an overlying soccer field. Also included are a childrens playground and passive area, and a walking/jogging trail (Figure 5-3).

[2] The Office of the Interagency Committee is a state agency that serves the *Interagency Committee for Outdoor Recreation (IAC)* and the *Salmon Recovery Funding Board (SRFB)*. The agency's staff, under the guidance of a director appointed by the Governor, implement policies and programs established by the two Boards, the Legislature, and the Governor.


SR 167 - Puyallup to SR 509 Tier II FEIS
Figure 5-7
Interurban Trail
Washington State Department of Transportation
LEGEND
INTERURBAN TRAIL
COMPOSITE PROJECT FOOTPRINT
0 1000 2000 3000
SCALE IN FEET
KING CO
PIERCE CO
PROPOSED SR 167


SR 167 - Puyallup to SR 509 Tier II FEIS
Figure 5-8
Recreational 4 (f) Resources
Puyallup River Bridge
Washington State Department of Transportation
N. MERIDIAN
PROPOSED SR 167
390
390
FILL
LEVEE ROAD
PUYALLUP RIVER
PUYALLUP RIVER BRIDGE
PUYALLUP RIVERFRONT TRAIL

5.5 Other Park, Recreational Facilities, Wildlife Refuges, and Historic Properties Evaluated Relative to the Requirements of Section 4(f)

The purpose of this discussion is to address Section 4(f) requirements relative to other park, recreation facilities, wildlife refuges, and historic properties in the project vicinity. As indicated below, the build alternative does not result in a use of these other Section 4(f) resources. The discussion of each resource either documents (1) why the resource is not protected by the provisions of Section 4(f) or (2) if it is protected by Section 4(f), why the build alternative does not cause a Section 4(f) use by (a) permanently incorporating land into the project, (b) temporarily occupying land that is adverse to the preservationist purposes of Section 4(f), or (c) constructively using land from the resource.

As noted above there are no wildlife and waterfowl refuges impacted by this project.

Some 70 historic properties within the area of potential effect (APE) were surveyed, with only those listed above being found eligible for the NRHP and therefore subject to Section 4(f) protection.

The following additional existing or planned recreation facilities are within the general vicinity of the project:

- Wapato Creek Trail
- Wapato Pointe PUD Trail
- Autumn Grove Trail
- Fife Landing Trail
- Fife Landing Trail Addition
- Fife Landing South Trail

Fife Landing South Trail – This trail extension, shown in the City of Fife's Comprehensive Plan 2002 Update, would follow Wapato Creek, crossing proposed SR 167 south of Valley Avenue and west of Freeman Road (Figure 5-5). As a planned facility, no estimate of the number of users is available. The Puyallup Tribe currently owns the land within the planned trail. Currently, no public agency owns the proposed trail corridor needed for right-of-way. Therefore, the Planned Fife Landing South Trail is not a 4(f) facility.

The remaining five existing and proposed trails listed above are all outside of the impact area of the project. Therefore, the provisions of Section 4(f) are not triggered.

5.6 Description of Use

5.6.1 Historic Resources

Of the five resources eligible for protection under Section 4(f), the project will require use of three historic residences (Table 5-2).

Table 5-2: 4(f) Use - Historic Resources Eligible for the NRHP

Parcel Number[1]	OAHP[2] Number	Address	Section 4(f)Use	Description
P168	27-4154	6803 20th St. E.	Yes – demolition	Residence
P202	27-4125	7001 20th St. E.	Yes – demolition	Residence
P239	27-4114	7717 Valley Ave. E.	Yes – demolition	Residence
P490	27-4160	3423 Freeman Road	No	Residence
(Baggenstos Farm)	Fife-A-1	N. Levee Rd.	No	Farmstead

[1]Assigned by WSDOT
[2]Office of Archaeology and Historic Preservation

Site 27-4154 – Under the preferred build alternative, there would be a use of this historic residence. The property is directly within the proposed relocation of 20th Street East and construction of a roundabout. It is proposed that the structure be offered for sale to a buyer willing to relocate the structure. The structure would be demolished if no qualified buyer was identified in one year.

Site 27-4125 – Under the preferred build alternative, there would be a use of this historic residence. The property is within the proposed I-5 interchange structures. It would also be adversely affected by the proposed relocation of 70th Avenue East with associated roundabout at the corner of 70th Avenue East and 20th Street East. It is proposed that the structure be offered for sale to a buyer willing to relocate the structure. The structure would be demolished if no qualified buyer was identified in one year.

Site 27-4114 – Under the preferred build alternative, there would be a use of this historic residence. Proposed widening of Valley Avenue East will adversely affect the property. The residence would be demolished by the proposed realignment of Valley Avenue with Valley Avenue Realignment interchange option. The Freeman Road and Valley Avenue (preferred) interchange options would require use of the property as well. The building would be under the proposed structure for mainline SR 167 and on the inside of the northbound SR 167 off-ramp, limiting access and increasing noise impacts to the residence.

Under the preferred Valley Avenue interchange option, the structure be offered for sale to a buyer willing to relocate the structure. The structure would be demolished if no qualified buyer was identified in one year.

Site 27-4160 – Under the preferred build alternative, no use, nor any constructive use, is expected of this historic residence. Although interchange options include widening of Freeman Road on the front (west) side of the site, the project can be designed to avoid any property acquisition.

Noise impacts were assessed in the Tier II DEIS and noise modeling near the site indicates noise levels will remain under 63-dBA under future buildout conditions with the proposed project. A noise wall for this area was determined to be not feasible and not reasonable because it is not possible to achieve a 7-dBA reduction. Visual impacts will be avoided, as the property front on Freeman Road currently has an extensive hedge system. In addition, the project proposes to install riparian plantings in the property directly across from the site on Freeman Road. These plantings of a riparian forest combined with an interchange off-ramp that is not elevated, will reduce the visual impacts from the project.

Site Fife-A-1 (Baggenstos Farm) – Under the preferred build alternative, there would not be a use of this historic farm. WSDOT will design the compensatory wetland mitigation site to avoid any identified 4(f) resource.

5.6.2 Recreational Resources

Of the seven recreational resources eligible for 4(f) protection, the project will require use of a planned facility and a multi-use trail (Table 5-3).

Table 5-3: Section 4(f) Use - Recreational Resources Eligible for 4(f) Protection

Recreational Resource	Location	Section 4(f)Use	Description
Planned Lower Hylebos Nature Park (Trail)	Adjacent to Milgard Restoration Site	No	Multi-use trail
Planned Pacific National Soccer Park	**I-5 Interchange**	**Yes – land acquisition**	**Soccer facility**
Interurban Trail	**I-5 Interchange**	**Yes – land acquisition**	**Multi-use trail**
Riverfront Trail	Puyallup River Bridge	No	Multi-use trail
Planned North Levee Trail	N. Levee Rd.	No	Multi-use trail
Puyallup Recreation Center	WSP Weigh Stations	No	Community recreation center

Planned Lower Hylebos Nature Park (Trail) – Under the preferred build alternative, access to this proposed trail will be limited by the removal of 8th Street East and 62nd Avenue East. There is no required use of this proposed trail. FHWA and WSDOT met with the City of Fife on May 8, 2003, and June 2, 2004, to discuss access issues for this proposed restoration project. The City of Fife has stated that a change in the location of proposed parking (at 8th Street East) would require an amendment to the city's Shoreline Permit although an alternative access point to this site, 4th Street East, exists. In addition, NOAA and it's partners (the U.S. Army Corps of Engineers) do not currently support changing the location of access to the site. Access to this proposed trail exists through 4th Street East, therefore will be no constructive use of this 4(f) facility. FHWA and WSDOT will continue to work closely with the City to address parking and access needs as project design is finalized.

Planned Pacific National Soccer Complex – Based on the project footprint of the proposed I-5 Interchange, relocation of 20th Street East, and the relocations of Hylebos Creek and Surprise Lake Drain with associated buffers as shown in

the February 2003 Tier II DEIS and a preliminary design drawing from the City of Fife depicting a potential 18 soccer fields at the complex site, the project would require use of 12 of the 18 proposed soccer fields (Figure 5-4). Through minimization measures and coordination with the City of Fife, use of these soccer fields have been limited to 6 of the currently designed 18 soccer fields (Figure 5-13).

Interurban Trail – The relocation of Hylebos Creek, mitigation for stream fill, would require use of approximately two to three acres at the southerly terminus of the trail (Figures 5-4 and 5-7).

Riverfront Trail – This existing trail beneath the two SR 167 Puyallup River bridges will require access to the path be limited during construction, for safety reasons. The ownership of the trail would not change; there will be no adverse change to the function of the trail; and no land would be acquired from the trail. FHWA, WSDOT, and the City of Puyallup are committed to work cooperatively in identifying an acceptable interim route for the trail during the course of construction. (See documentation at the end of this chapter.)

Noise impacts in the vicinity of the Riverfront Trail were assessed in response to comments received on the SR 167 Tier II Draft EIS. Existing noise levels range from 65 to 71 dBA. Noise modeling indicated that future conditions without the project will cause noise levels to increase from 2 to 9 dBA. Future build out with the project will cause noise levels to increase an additional 1 dBA. Although the projects contributions to noise impacts are minimal, a noise wall along the south shoulder of SR 167 between Milwaukee Avenue East and SR 167/161 was found to be both feasible and reasonable. Noise mitigation will be provided at this location. Visual impacts are not anticipated at this site, as there will be no substantive change to the trail area from the project. Therefore, there is no constructive use of the site.

Planned North Levee Trail – This planned trail is proposed to run adjacent to one of the proposed wetland mitigation sites in the *SR 167 Conceptual Mitigation Plan,* WSDOT February 2005. Part of the wetland mitigation proposal at this site includes breaching of the Puyallup River dike and N. Levee Rd. to provide hydraulic connectivity for the wetlands being established. WSDOT has not identified a preferred mitigation site(s), therefore there is no use of this planned trail by the project at this time. Should that change in the future, a separate 4(f) evaluation will be circulated.

Puyallup Recreation Center – There would be no right of way acquisition from the center, so no Section 4(f) land would be permanently used by being incorporated into a transportation facility. There would be no access impacts, as access for the center is from the local street system on the opposite side from the highway. The Tier II DEIS and the studies performed in support of it did not indicate any impacts that would affect the function or use of this facility. The aesthetics in the vicinity of the recreation center may be somewhat impacted. The roadway will become a dominant element within the rural setting adjacent to the baseball fields. The lights from cars at night will detract from current views. Mitigation proposed includes use of architectural or vegetative screening to block the view of traffic and vegetating the embankment side slopes.

The noise study prepared in support of the Tier II DEIS (Parsons Brinkerhoff, 2001) indicated noise at the recreation center would increase from 52 dBA to 70 dBA, which is a substantial increase from the existing and no build conditions. The FHWA noise abatement criterion for active recreation areas is 67 dBA. Construction of a noise wall at that location was found to be feasible because a 10-foot-high wall 2,400 feet long would provide a 7 dBA-reduction in noise for the Recreation Center. However, it was determined to be not reasonable under established WSDOT criteria. Using the "Noise Evaluation Procedures for Existing State Highways" (WSDOT Directive D 22-22), a residential equivalency of 15 homes was calculated for the center based on the number of users. In order to achieve the 7-dBA reduction in noise, the recreation center would need a residential equivalency of 25 homes.

5.7 Avoidance Alternative

5.7.1 No Build Alternative

The No Build Alternative, while it will avoid impacts to all 4(f) resources, does not satisfy the purpose and need of the project, which is to improve regional mobility, serve freight and passenger movement, reduce congestion and improve safety, improve system continuity between I-5 and the SR 167 freeway, and maintain or improve air quality.

5.7.2 Tier I

The design of a new freeway that would connect existing SR 167 (where it connects with North Meridian in Puyallup) to I-5 and, ultimately, SR 509 is limited to an area between the Puyallup River to the south and Fife Heights (steep slopes) to the north. This narrow section of the Puyallup River Valley is completely within the external boundary of the Puyallup Tribal Reservation and contains a number of tribal trust properties. The Puyallup Tribe has voiced strong opposition to any corridor alternative that requires the use of tribal trust lands. Designs for this new freeway must also factor in existing environmental resources such as Wapato Creek, Oxbow Lake, Surprise Lake Drain, and Hylebos Creek; wetlands (over 107 acres of wetlands delineated by the project in this area); and associated floodplains. Furthermore, design options for an interconnection with I-5 are limited to the two existing interchanges (Port of Tacoma and 54th Avenue East) and one potentially new interchange around 70th Avenue East.

With these limitations in mind, all corridor alternatives that would provide the necessary connections within this short segment were evaluated. Tying the proposed SR 167 Extension freeway into the existing I-5 / 54th Avenue East Interchange was never considered a viable option. That interchange and adjoining surface streets are built-out and operating at maximum capacity. The I-5 / 54th Avenue East Interchange, and the signalized 54th Avenue East intersections with 20th Street East and Pacific Highway were all operating at a

Level of Service (LOS) "F" back in 1990. Impacts to this industrial/commercial area would require extensive and significant displacement and relocation costs.

Several 4(f) recreational resources such as Yamamoto Park, Fife Community Pool, Centennial Park, Wapato Nature Area, Wedge Park, and Dacca Park would be difficult to avoid. Up to 40 known historic 4(f) resources exist within this corridor path.

Rebuilding the entire system, adding additional traffic to this system, and designing a corridor that avoids all 4(f) resources while still meeting the purpose and need of the project is potentially not feasible and is not prudent. Therefore, all corridor alternatives that would connect with the existing I-5 at 54th Avenue East were rejected.

This left a total of nine corridor alternatives which were further analyzed. The remaining alternatives were subjected to an initial screening analysis based on several criteria detailed below and were presented for public review.

Use of 4(f) Protected Resources
Eastern Washington University Archeological and Historical Services (AHS) performed the cultural resources overview for the SR 167 Tier I EIS. Background research included consultation with personnel at the Washington State Office of Archaeology and Historic preservation (OAHP) in Olympia prior to 1993. Findings included three properties recorded by Pierce County and an ethnographically documented Puyallup winter village. As confirmed in the Cultural Resource Investigations for the Washington State Department of Transportation's SR 167: Puyallup to SR 509 Project, Pierce County, Washington, AHS May 2004, and the June 15, 2004, SHPO concurrence, the three recorded properties, George Hoertrich Electrical Shop, the Golden Rule Motel, and the Firwood School Gymnasium, do not meet the National Register Criteria.

However, a number of recreational 4(f) resources were identified, including the Fife Community Pool, the proposed Nisqually Delta/Mount Rainier Trail, the proposed Wapato Creek Nature Trail, the Puyallup Recreation Center, and various bike trails.

rejected

Tribal Trust Lands
Corridor alternatives that would ~~require use of~~ Tribal Trust Lands were ~~determined to be not~~ feasible or prudent. Acquisition of Tribal Trust Lands would be entirely dependent on whether the Puyallup Tribe is a willing seller of their entrusted property and the tribe clearly indicated its opposition to such a sale.

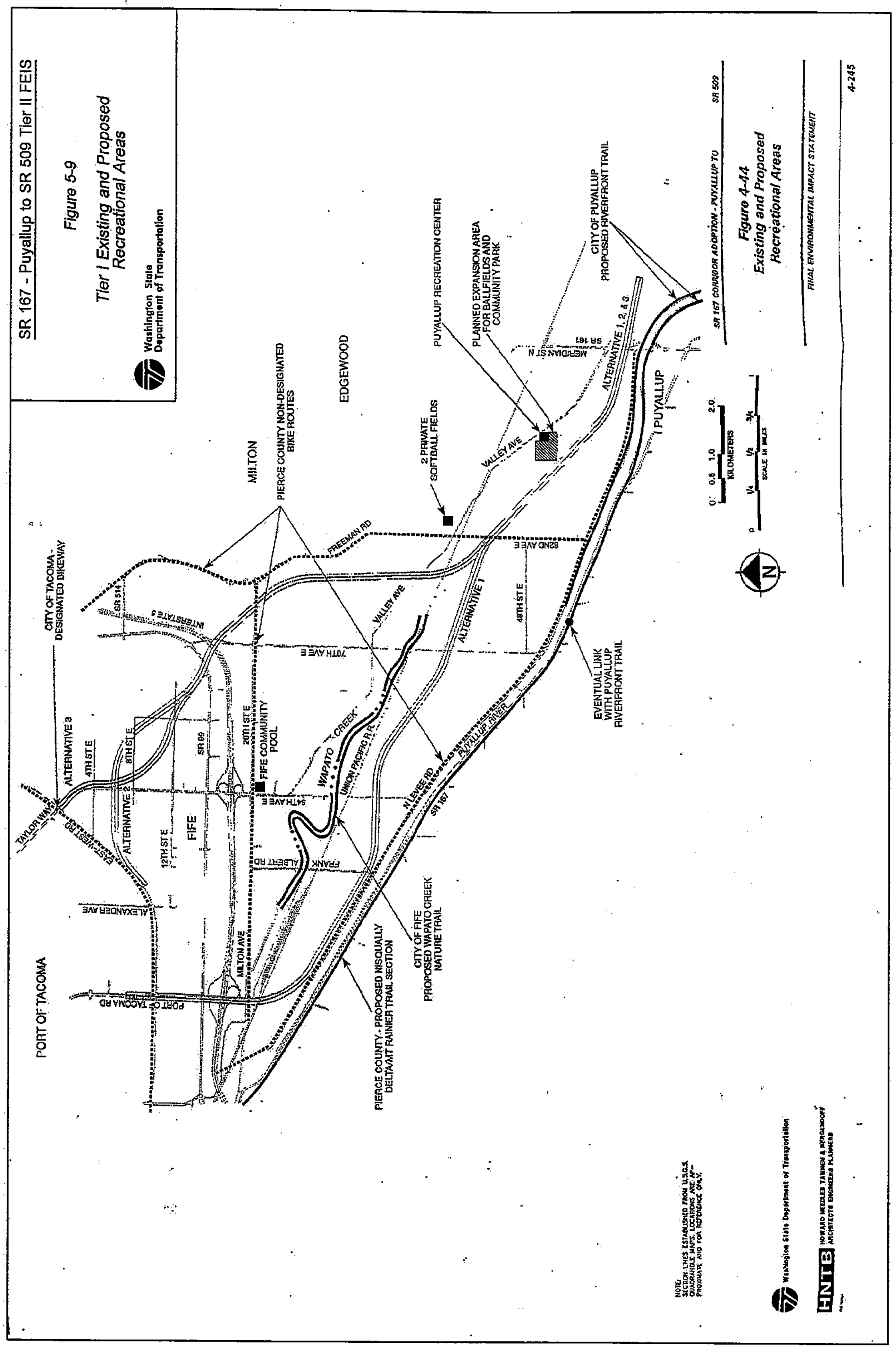
Avoidance of Wetlands, Streams, and Floodplains
Corridor alternatives that would have significantly greater impacts to wetlands, streams, or floodplains were determined to be not feasible or prudent. Any impacts to these resources require a permit from the U.S. Army Corps of Engineers, per Section 404. The permitting agency clearly indicated that only alternatives that avoided or minimized impacts to these resources would meet permit requirements.

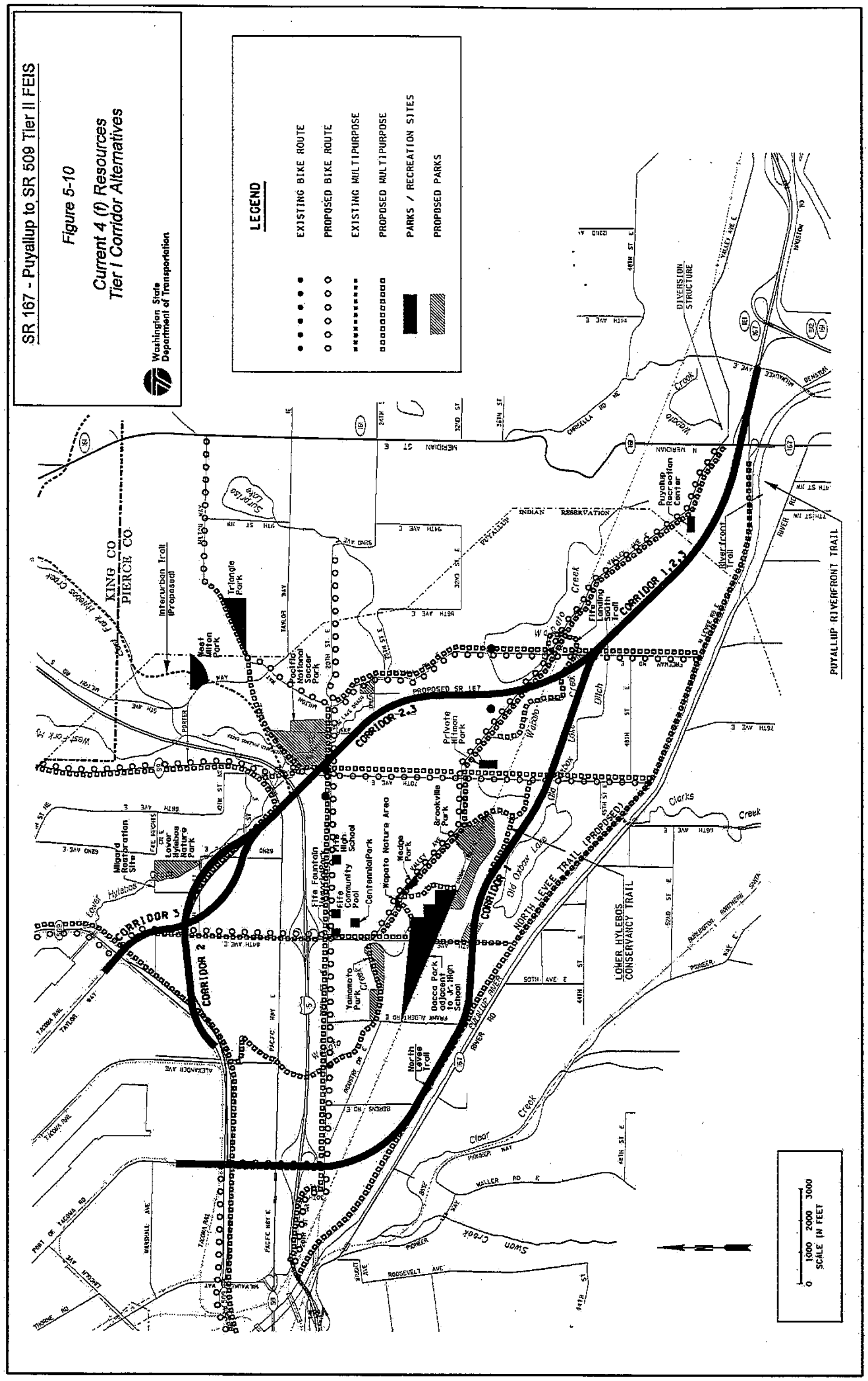
Of the nine corridor alternatives, six alternatives would impact tribal trust lands while at the same time having significantly greater impacts to aquatic resources

such as wetlands, streams, and floodplains. In addition, all of these alternatives would impact 4(f) resources. Due to these increased environmental impacts, the opposition of the Puyallup Tribe to use of tribal trust properties, and the impact to additional 4(f) resources, these corridor alternatives are not feasible and prudent avoidance alternatives.

Only three corridor alternatives avoided all of the then identified 4(f) resources, including the then proposed Riverfront Trail, proposed Wapato Creek Nature Trail, North Levee Bike Route, and the Puyallup Recreation Center, as shown in Figure 5-9.

Pursuant to 23 CFR §771.135(o)(2), the three remaining corridor alternatives in Tier I were reviewed based on additional design details and identified 4(f) resources. Figure 5-10 shows the overlay of the three Tier I corridor alternatives and current identified 4(f) resources.


SR 167 - Puyallup to SR 509 Tier II FEIS
Figure 5-9
Tier I Existing and Proposed Recreational Areas
Washington State Department of Transportation
SR 167 CORRIDOR ADOPTION - PUYALLUP TO SR 509
Figure 4-44
Existing and Proposed Recreational Areas
FINAL ENVIRONMENTAL IMPACT STATEMENT
4-245
PORT OF TACOMA
CITY OF TACOMA - DESIGNATED BIKEWAY
MILTON
EDGEWOOD
FIFE
PUYALLUP
PIERCE COUNTY NON-DESIGNATED BIKE ROUTES
2 PRIVATE SOFTBALL FIELDS
PUYALLUP RECREATION CENTER
PLANNED EXPANSION AREA FOR BALLFIELDS AND COMMUNITY PARK
CITY OF PUYALLUP PROPOSED RIVERFRONT TRAIL
EVENTUAL LINK WITH PUYALLUP RIVERFRONT TRAIL
FIFE COMMUNITY POOL
CITY OF FIFE PROPOSED WAPATO CREEK NATURE TRAIL
PIERCE COUNTY - PROPOSED NISQUALLY DELTA/MT RAINIER TRAIL SECTION
ALTERNATIVE 1
ALTERNATIVE 2
ALTERNATIVE 3
ALTERNATIVE 1, 2, & 3
WAPATO CREEK
UNION PACIFIC R.R.
PUYALLUP RIVER
N LEVEE RD
SR 167
SR 161
MERIDIAN ST N
VALLEY AVE
FREEMAN RD
82ND AVE E
48TH ST E
70TH AVE E
54TH AVE E
20TH ST E
12TH ST E
8TH ST E
4TH ST E
SR 99
SR 514
INTERSTATE 5
MILTON AVE
FRANK ALBERT RD
ALEXANDER AVE
PORT OF TACOMA RD
TAYLOR WAY
EAST-WEST RD
KILOMETERS
SCALE IN MILES
HNTB


SR 167 - Puyallup to SR 509 Tier II FEIS
Figure 5-10
Current 4 (f) Resources
Tier I Corridor Alternatives
Washington State Department of Transportation
LEGEND
EXISTING BIKE ROUTE
PROPOSED BIKE ROUTE
EXISTING MULTIPURPOSE
PROPOSED MULTIPURPOSE
PARKS / RECREATION SITES
PROPOSED PARKS
CORRIDOR 1,2,3
CORRIDOR 2,3
CORRIDOR 1
CORRIDOR 2
CORRIDOR 3
PROPOSED SR 167
KING CO
PIERCE CO
PUYALLUP RIVERFRONT TRAIL
LOWER HYLEBOS CONSERVANCY TRAIL
NORTH LEVEE TRAIL (PROPOSED)
0 1000 2000 3000
SCALE IN FEET

Tier 1 Corridor Alternative 1
Based on the current analysis of 4(f) facilities, the following historic and recreational 4(f) resources would require a use by Corridor Alternative 1:

- Historic 4(f) resource: the Baggenstos Farm (Fife A-1)
- Recreational 4(f) resources:
  - A planned park adjacent to 54th Avenue East;
  - The planned North Levee Trail; and
  - The existing Autumn Grove trail.

All potential historic 4(f) resources may not have been identified for this corridor, as the cultural resource survey performed for the Tier II document was limited to the preferred Tier 1 corridor alternative (2).

Corridor Alternative 1 is not a prudent alternative due to the following factors:

1. Impacts to Puyallup Tribal Trust Lands: Corridor Alternative 1 would bisect one of the few remaining large tribal trust properties for the Puyallup Tribe, and was not supported by the Tribe (Figure 5-11). A number of project related issues remained unresolved with the Puyallup Tribe, including visual, noise, and traffic impacts to Tribal Trust Lands, but the Tribe clearly indicated would only support a corridor alternative which avoided all Tribal Trust Lands. Commitments to the Puyallup Tribe are in Appendix K of the SR 167 Tier I EIS and the Tier I Record of Decision (ROD).

2. Wetlands: Wetland impacts were reanalyzed as part of the *404(b)(1) Alternatives Analysis*, WSDOT July 2004. A 220-foot corridor width had been applied in estimating wetland impacts for the Tier I document. Refinement of the corridor in Tier II revised the footprint of the project such that impacts were evaluated within an approximately 400-foot area, to accommodate interchange options and park and ride facilities. Application of a 400-foot-wide zone to the analysis of wetland impacts significantly increases the amount of impacts associated with Corridor Alternative

3. Also, although Tier I wetland impacts were based on wetland inventories[3], one partially delineated wetland[4] would be impacted by Corridor Alternative 1 which also increased impacts. Table 5-4 shows the revised wetland impact analysis.

[3] U.S. Fish and Wildlife National Wetland Inventory maps, along with the Pierce County, City of Fife, and City of Puyallup wetland inventory maps were used to identity wetlands in the project area in Tier I.
[4] Wetlands were delineated in accordance with the U.S. Army Corps of Engineers *Wetland Delineation Manual* (Environmental Laboratory, 1987). Not all wetlands were completely delineated (i.e. all boundaries and buffer areas identified), just wetlands within the project footprint.

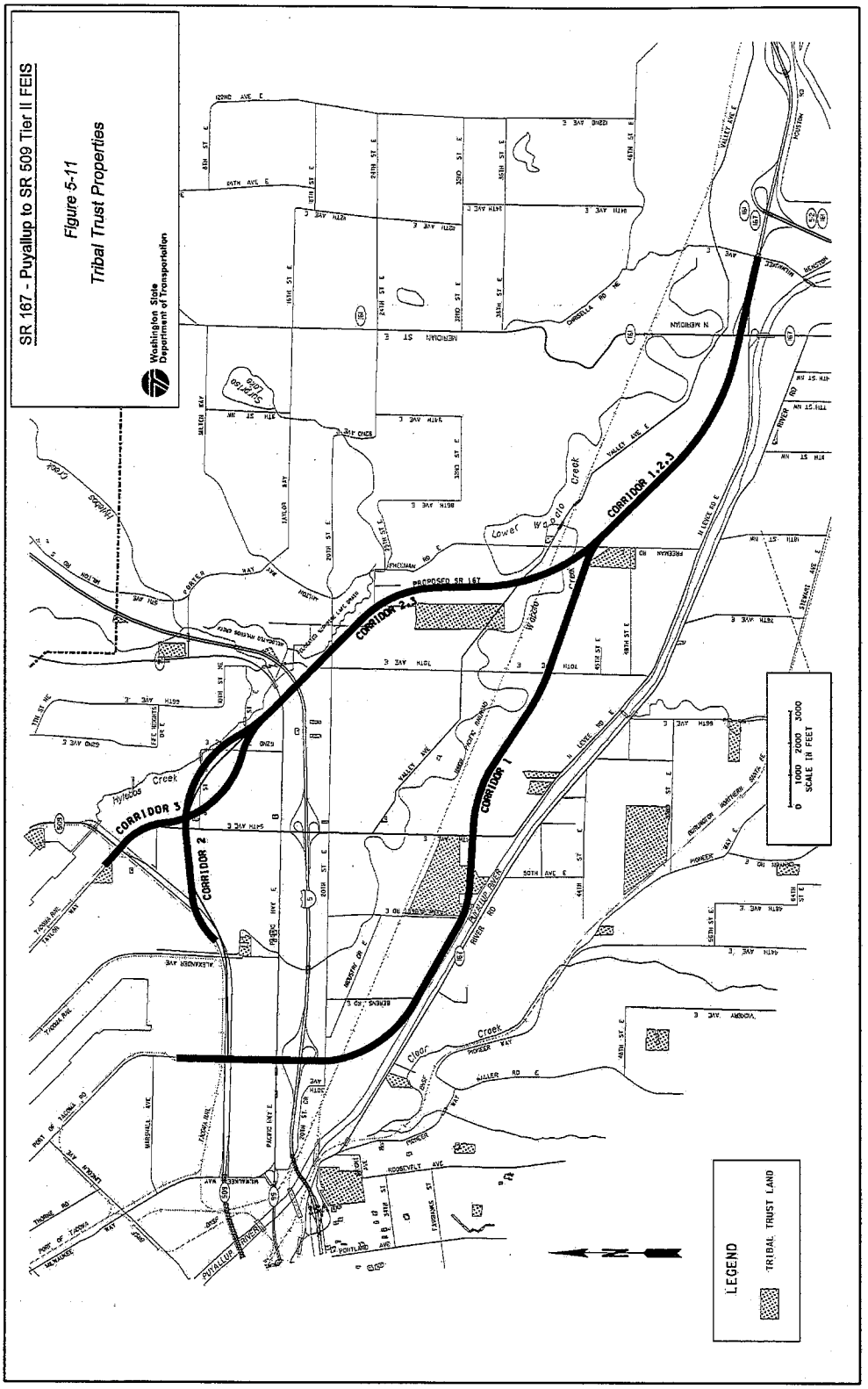

SR 167 - Puyallup to SR 509 Tier II FEIS
Figure 5-11
Tribal Trust Properties
Washington State Department of Transportation
CORRIDOR 1,2,3
CORRIDOR 2,3
CORRIDOR 3
CORRIDOR 2
CORRIDOR 1
PROPOSED SR 167
Hylebos Creek
Wapato Creek
Clear Creek
Lower Wapato Creek
LEGEND
TRIBAL TRUST LAND
SCALE IN FEET
0 1000 2000 3000

Table 5-4: Revised Estimated Tier I Corridor Wetland Impacts

Corridor Alternative [a]	Segments	Tier I FEIS Wetland Impacts	Revised Estimated Wetland Impacts
Corridor 1	A & E	14.55	>37.89 [c]
Corridor 2	A, B, & C	7.44	32.9 [b]
Corridor 3	A, B, & D	15.98	>44.08 [c]

a) Corridor Alternative from the Tier I EIS.
b) Corridor 2 impacts are not an estimate, but actual project impacts from the Tier II EIS.
c) Currently definable estimates. These impacts would most likely increase proportionally with field delineation along the entire corridor.

Corridor Alternative 1 would also limit mitigation opportunities in the Puyallup River basin, as the corridor would impact the Union Pacific Railroad Site, which has a high potential for mitigating all of the projects impacts for wetland fill activities.

Floodplain impacts: The levy system on the Puyallup River is currently failing due to excessive buildup of sediment and the determination by the US Army Corps of Engineers, that dredging the sediment is no longer a supportable practice. A study is underway to determine the new boundaries of the floodplain in the Puyallup River Basin. Corridor Alternative 1, with its proximity to the Puyallup River, would be within the extended 100-year floodplain. Designing the roadway within this extended floodplain would be very difficult and potentially costly, as determining what the impacts of the failing levy system would have to facilities in the proximity of the Puyallup River are not currently available.

Floodplain benefits: Corridor Alternative 2 includes the relocation of Hylebos Creek. This relocation will address current and future projected increased flooding of I-5 in the vicinity of the City of Fife (Fife Curve). Corridor Alternative 1 would not require the relocation of Hylebos Creek.

Tier 1 Corridor Alternatives 2 and 3
Corridor Alternative 2 and 3 differ only between SR 509 and the I-5 Interchange. Therefore, all 4(f) resources affected by the preferred alternative would also be used by Corridor Alternative 3. Corridor Alternative 3, as shown in Table 5-4, would have the most significant wetland impact of the corridor alternatives. With 44 acres of wetland impacts, the project would fail to receive the necessary permits to construct the project. Specifically, Corridor Alternative 3 would fail to meet the requirements for Section 404, specifying a design that is the Least Environmentally Damaging and Practicable Alternative (LEDPA).

There are no corridor alternatives meeting the purpose and need of this project that would avoid 4(f) resources based on the current analysis of 4(f) resources. Corridor 1 would use three recreational resources and Corridors 2 and 3 would use two recreational resources. Although one, as opposed to three, historic resources have been identified for Corridor 1, additional historic resources are document in the vicinity of Corridor 1. In addition, Corridor Alternatives 1 and 3 are not feasible and prudent avoidance alternatives due to their impacts to

wetlands and the determination by the U.S. Army Corps of Engineers that these alternatives are not LEDPA.

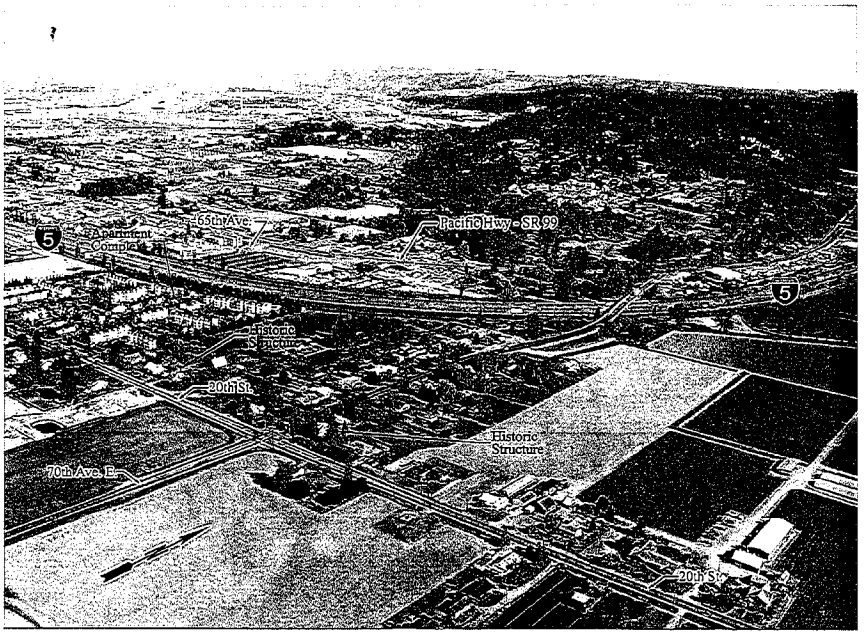
5.7.3 Tier II

In the Tier II analysis, the preferred Corridor Alternative 2 design was refined and interchange options were developed as described in the previous section, Alternatives and Options. Avoidance alternatives associated with the interchanges are discussed below.

I-5 Interchange
After the ROD for the Tier 1 EIS was approved by FHWA, the mainline alignment of SR 167 had to be redesigned because geometric design standards were not met. For the mainline redesign, five different centerline-only options were developed for SR 167 between SR 509 to just south of the I-5 Interchange. All these options met the current design standards and changed the I-5 crossing from a horizontal curve to a tangent section.

Avoidance of the Planned Pacific National Soccer Facility
State and Federal guidelines require a minimum distance of 1 mile between interchanges. Because of the location of Hylebos Creek and the geography of the area in this vicinity, it is not possible to place this interchange any further north than 0.8 miles from the 54th Avenue East I-5 Interchange. In addition, any redesign of the SR 167 mainline to the north would continue to require use of the Interurban Trail. Based on these factors, it is neither feasible nor prudent to relocate the mainline to the north in an attempt to avoid the planned Pacific National Soccer Facility.

Avoidance of Historic Resources
The proposed I-5 interchange location is also limited by the two historic 4(f) resources on 20th Street East on the south/west side of the alignment. Avoidance of these two historic resources would require the relocating the interchange at least 300 feet, which would not meet standards for placement of interchanges to the south. In addition, relocating the proposed I-5 Interchange closer to existing 54th Avenue East Interchange would impact a commercial area of the City of Fife. As shown in the picture below, the majority of the impacts would be associated with an apartment complex with 241 units, with one through three bedrooms. This complex has a requirement to fill 20 percent of the complex with low income families. The apartment complex reported 90 percent occupancy in 2001. Displacing these families would increase displacement impacts associated with the I-5 Interchange by 217 to 241 Multi-Family Units, an impact of extraordinary magnitude. Therefore, redesigning the mainline to avoid these 4(f) resources is neither feasible nor prudent.

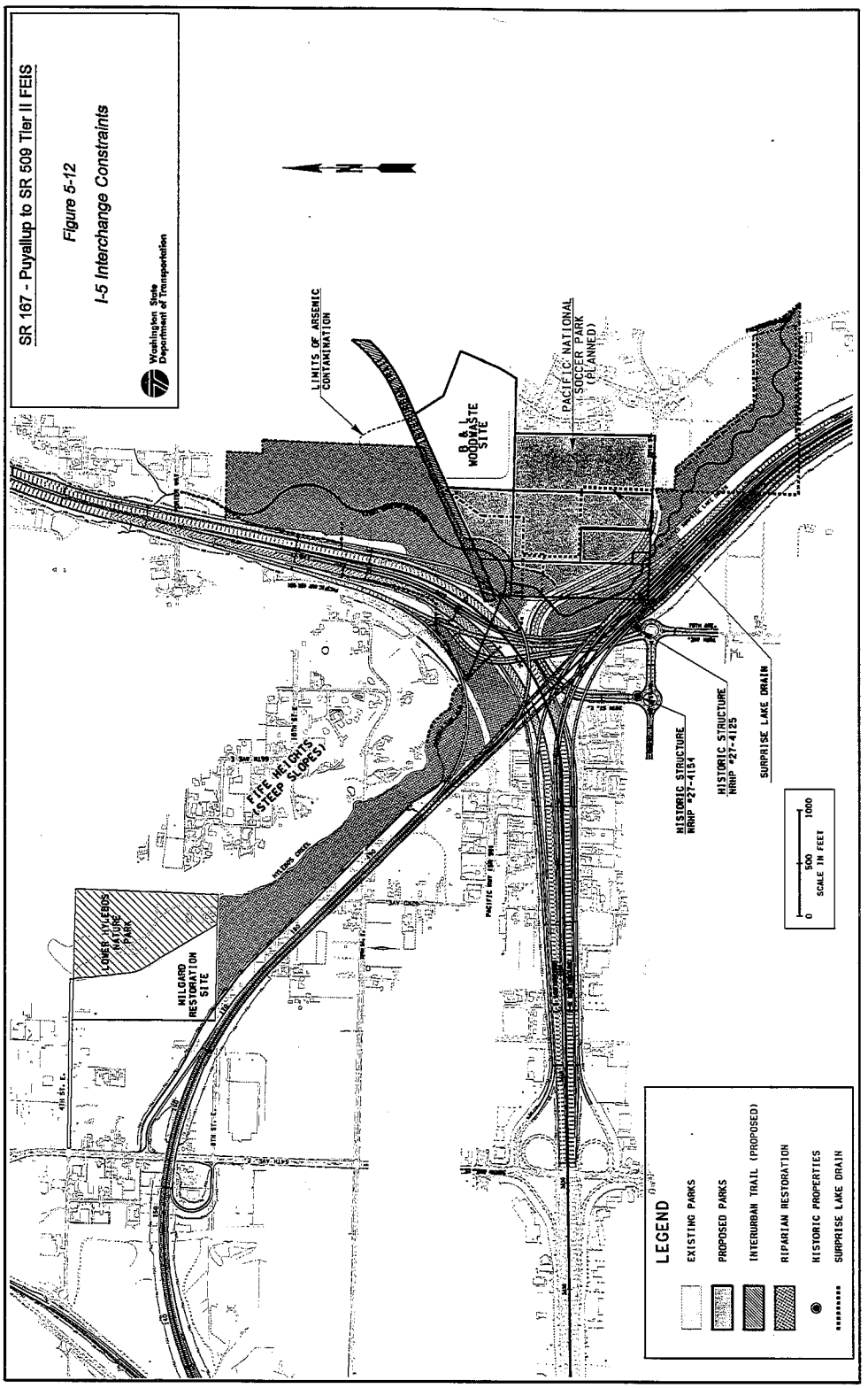


SR 167 Bridge Over Existing 20th Street East
SR 167 will have a direct impact on 20th Street East. Maintaining 20th Street East in its current alignment would avoid the historic (4f) resource, Site No. 27-4154. Extending the structure for the I-5 Interchange to provide continued access for this local road was evaluated.

In order to accommodate required bridge clearance for this existing roadway, the I-5 Interchange would be required to be elevated to four levels. This option was evaluated in the *Value Engineering Study Report, SR 167 and I-5 Interchange*, October 2000.

Residents in the Fife Heights area expressed concern based on visual impacts from the elevated structures. At three levels, the I-5 interchange will be approximately 80 feet high; adding a fourth level to the I-5 interchange will add approximately 26 to 30 feet of height. Visual and audible impacts for these residents would occur if a four-level interchange was developed (Figure 5-12).

Cost estimates for additional structures necessary for a four-level interchange would be $87.5 million more than a three-level interchange, due to poor soil stability. Although it is feasible that a four-level structure could be designed for the proposed I-5 interchange, it is not prudent due to an additional construction cost of extraordinary magnitude. Therefore, it was determined that both 70th Avenue East and 20th Street East should be realigned in order to keep the total interchange at three levels.


SR 167 - Puyallup to SR 509 Tier II FEIS
Figure 5-12
I-5 Interchange Constraints
Washington State Department of Transportation
LIMITS OF ARSENIC CONTAMINATION
B & L WOODWASTE SITE
PACIFIC NATIONAL SOCCER PARK (PLANNED)
FIFE HEIGHTS (STEEP SLOPES)
LOWER HYLEBOS NATURE PARK
WILDARD RESTORATION SITE
HISTORIC STRUCTURE NRHP #27-4154
HISTORIC STRUCTURE NRHP #27-4125
SURPRISE LAKE DRAIN
0 500 1000
SCALE IN FEET
LEGEND
EXISTING PARKS
PROPOSED PARKS
INTERURBAN TRAIL (PROPOSED)
RIPARIAN RESTORATION
HISTORIC PROPERTIES
SURPRISE LAKE DRAIN

Placement of the relocation of 20th Street East is limited by design factors, such as the distance between the two-lane roundabouts associated with the 20th Street East and 70th Avenue East relocations. If the relocation was shifted to the west, a large apartment complex described above would be impacted requiring extensive relocations as well as high real estate costs. The apartment complex also contains 48 Section 8, low-income units. Impacts to the apartment complex would include environment justice impacts, due to those low-income facilities. In addition, none of the potential designs for 20th Street East would avoid all 4(f) resources. Therefore, it is not prudent to bridge existing 20th Street East or relocate 20th Street East to the west.

Relocation of Hylebos Creek

The southern terminus of the Interurban Trail and the planned Pacific National Soccer Park are impacted by the proposal to relocate Hylebos Creek. Existing Hylebos Creek, between the existing 70th Avenue East bridge and the first existing I-5 crossing, would be filled as part of the northbound I-5 widening. Leaving the creek in the existing location but inside a closed pipe, would not be acceptable to permitting agencies. Impacts to the creek affect 2,050 linear feet of stream bed. Closed pipes of any significant length are an effective block to aquatic species, such as salmonids. Therefore, a closed pipe could not be installed in the existing location.

Relocating the creek further to the west side of proposed I-5 widening would not provide enough riparian buffer to meet City of Fife Critical Area Ordinances. The channel would need to be linear and potentially armored, which would impact the creek instead of improve it. Furthermore, this area is needed to provide water quality treatment for mainline I-5 and the southbound I-5 to SR 167 off ramp. This is because I-5 in the vicinity of the proposed interchange drains all highway runoff to the west with no other options to channel the stormwater elsewhere.

Crossing I-5 at the preferred location provides the fewest impacts to Hylebos Creek and optimizes flood conveyance. The proposed design will reduce existing and future flooding problems in the vicinity, according to a study prepared for WSDOT (MGS et al., 2004). Portions of I-5 in this vicinity were flooded during the 1990 and 1996 floods. WSDOT is evaluating the I-5 profile in an effort to keep the new I-5 crossing of Hylebos Creek above the floodwater. WSDOT is limited on how high the I-5 profile could be elevated because of the height limitations on the interchange structures due to foundation considerations, and the additional structural costs resulting from extending bridge lengths in response to raising the I-5 profile. Therefore, the relocated stream channel will be designed to successfully address both existing and future flooding of I-5.

WSDOT considered locating the new Hylebos Creek crossing in the vicinity of the existing 70th Avenue East Bridge. This would reduce the channel length required for the relocation, avoid impacts to a sewer main, and avoid impacts to the Interurban Trail.

However, this option would not function as efficiently for flood conveyance as the preferred option, potentially resulting in flooding of the new I-5 freeway

bridge over Hylebos Creek, and would not resolve the existing problems of flooding over I-5 lanes.

Also, if the Hylebos crossing was moved futher north, it would impact the crossing of Surprise Lake Drain. If the Surprise Lake Drain crossing is moved further north, then this stream will impact the Interurban Trail. If a connection to relocated Hylebos Creek is not provided, then two bridges at I-5 would be required instead of one, which will add cost to the project.

Relocating Hylebos Creek further north would also have greater ecological impacts to Hylebos Creek because of the construction of relocated 70th Avenue East and the southbound I-5 to northbound 167 Off-Ramp. For the reach between the existing SR 99 and 70th Avenue East bridges, the remaining riparian buffer for Hylebos Creek would be reduced to essentially zero on the north and about 100 feet to the south. These buffers are deficient by any scientific standard, including the City of Fife's Critical Areas Ordinance, and the Integrated Streambank Protection Guidelines, which is WSDOT's standard for best available science. This option would also eliminate the wildlife linkage with the Surprise Lake Tributary, and require separate I-5 crossings for this tributary stream. WSDOT would not likely acquire permits for this work.

Surprise Lake Drain Relocation
The Planned Pacific National Soccer Facility is located within the ditched system of Surprise Lake Drain. The project has proposed to relocate Surprise Lake Drain as part of the mitigation for fill of Surprise Lake Drain by the mainline section of SR 167. In the DEIS, the relocation of Surprise Lake Drain would be located to the east of relocated 20th Street East. The relocation as originally proposed, and the riparian buffer (at least 150 feet wide), would impact the planned soccer facility, requiring use of 12 of 18 proposed soccer fields (approximately 40 of 54 acres) (Figure 5-4).

Through coordination with the City of Fife, WSDOT redesigned both the relocation of 20th Street East and the relocation of Surprise Lake Drain. This redesign, though limited by roadway curvature standards for 20th Street East and regulatory buffers for Surprise Lake Drain, minimizes use of the soccer facility such that the City of Fife will be able to design 12 soccer fields in the remaining area (Figure 5-13).

Valley Avenue Interchange
The SR 167 corridor alignment in the vicinity of Valley Avenue is limited by a historic and recreational 4(f) resource to one side, and a historic 4(f) resource on the other side.

One historic resource, a residence, is beneath the structure of the mainline alignment as it bridges Valley Avenue. This residence would be located between the structure of mainline SR 167 and the proposed off-ramp from northbound SR 167 to Valley Avenue.

The following factors confine the alignment near this site:

- Design requirements: a shift of the corridor to avoid 4(f) resources would require the mainline corridor alignment to shift at least 300 feet either east or west of the proposed alignment;
- Geographical limitations to the east of Freeman Road: The corridor alignment cannot be shifted to the east due to cliffs adjacent to Freeman Road;
- Tribal trust lands: Shifting the alignment west would significantly impact six tribal trust properties. One tribal trust property also exists to the east of the alignment (Figure 5-11);
- Crossings of Wapato Creek: The current alignment limits crossings of Wapato Creek to one mainline crossing. Shifting the alignment either east or west would increase mainline crossings by at least one.

5.8 Measures to Minimize Harm

5.8.1 Historic Resources

As outlined in the Memorandum of Agreement (see Appendix I), the residences will be offered for sale, based on the buyer's ability to move the residence to a different location. If the house does not sell within a year, photo-documentation will occur and the residences will be demolished.

5.8.2 Recreational Resources

Lower Hylebos Nature Park

Access to the site, including parking, will be coordinated with the City of Fife. Discussions to date have covered improvements to 4th Street East and the possibility of constructing a pedestrian bridge across Hylebos Creek.

Planned Pacific National Soccer Park

The City of Fife was aware of the highway design at the time they proposed and acquired the soccer complex property, and presentations made to the public of the complex design in June 2003 showed the proposed highway project relative to the proposed layout of soccer fields and associated site improvements. Through meetings with the city, WSDOT prepared an alternative design of the I-5 interchange, which reduced impacts to the planned soccer complex such that 12 fields are possible at this site (Figure 5-13). This meets the minimum requirements for the City of Fife for funding of this facility.

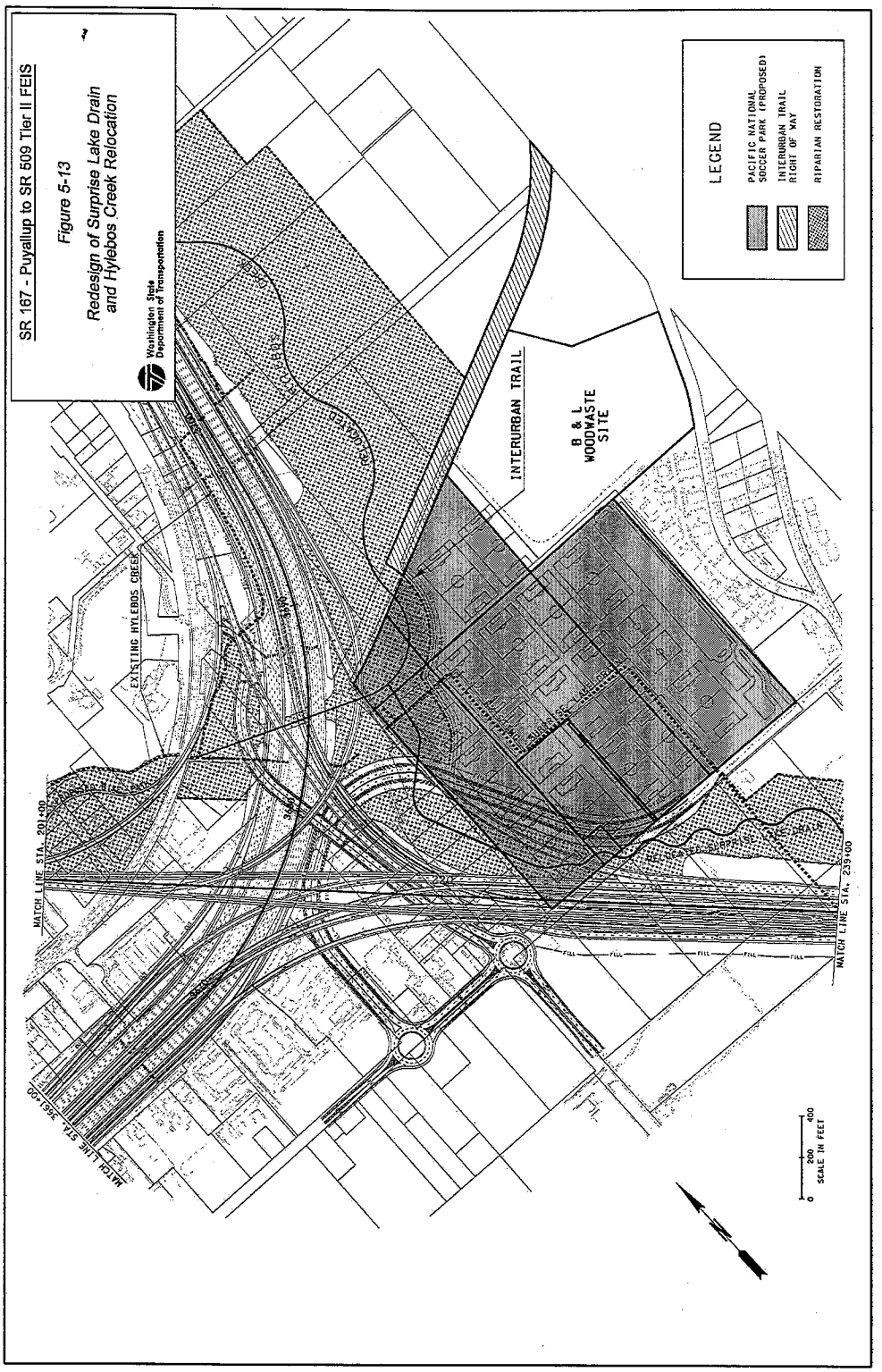
The SR 167 Project has incorporated elements into the design of the project that will benefit the planned Pacific National Soccer Park. The *Analysis of the SR 167 Extension and Riparian Restoration Proposal in the Hylebos Watershed*, November 2004, included stormwater runoff from the soccer complex. The project proposal to relocate Surprise Lake Drain from its current ditched location and create a riparian zone around the relocation area will directly benefit the planned soccer facility. The benefits of this relocation would also include reducing flood impacts to the planned Pacific National Soccer Park.

Because funding for construction of SR 167 is not secured at this time, and the City is currently developing the master plan for the soccer complex, WSDOT is committed to continue working with the City of Fife as the plans for both the relocation of Surprise Lake Drain and Hylebos Creek with associated regulatory buffers are refined. Final measures to minimize harm to the soccer complex will be determined once construction funding for SR 167 has been secured. Mitigation, if necessary, will be provided for any required use of the developed soccer facility.

Interurban Trail

Access to relocated 20th Street East which will provide access to relocated 70th Avenue East through local streets, will be provided as part of the relocation of the southern terminus of Interurban Trail (Figure 5-13). Any additional facilities, such as parking that are developed for the trailhead of the Interurban Trail by the City of Milton, if use is required, will also be addressed. A conversion package will be put together detailing that all practical alternatives to the conversion have been evaluated and rejected;the fair mark et value of the land to be converted and the replacement land;that the replacement land is of reasonably equivalent recreation or habitat utility and location;and that the replacement land meets eligibility requirements, prior to construction of SR 167.

In addition, the *Analysis of the SR 167 Extension and Riparian Restoration Proposal in the Hylebos Watershed*, October 2004, also determined that flood impacts to the Interurban Trail will be limited to the 100-year storm event with the projects proposal to relocate Hylebos Creek and establish the riparian corridor.


SR 167 - Puyallup to SR 509 Tier II FEIS
Figure 5-13
Redesign of Surprise Lake Drain and Hylebos Creek Relocation
Washington State Department of Transportation
LEGEND
PACIFIC NATIONAL SOCCER PARK (PROPOSED)
INTERURBAN TRAIL RIGHT OF WAY
RIPARIAN RESTORATION
INTERURBAN TRAIL
B & L WOODWASTE SITE
EXISTING HYLEBOS CREEK
MATCH LINE STA. 201+00
MATCH LINE STA. 239+00
MATCH LINE STA. 305+00
SCALE IN FEET
0
200
400

5.9 Coordination

From the beginning of the planning process around 1990, a considerable effort has been made to include a wide assortment of groups and individuals as resources. A Steering Committee (which became a Partners Committee in Tier II) is comprised of representatives from the City of Puyallup, Port of Tacoma, City of Tacoma, City of Edgewood, FHWA, City of Fife, City of Milton, Pierce County, Pierce Transit, Puyallup Tribe, Puget Sound Regional Council, and WSDOT. A citizen's Advisory Committee was made up of citizens from the various jurisdictions who are affected by or interested in the project. Stakeholder interviews were held to solicit the opinions of representatives of the various jurisdictions. Design workshops were held with outside agencies to solicit their ideas about the project. A Value Engineering Study was conducted which looked at 67 options for the design of the I-5/SR 167 interchange. At least four open houses were held to present the project to the public and gather their input. Meetings have also been held with the Tacoma Chamber of Commerce, Edgewood Business Association, Puyallup River Watershed Council, and other businesses, developers, city councils, and local homeowners.

As part of the 404 Merger Agreement process, FHWA and WSDOT regularly met with the National Marine Fisheries Service, U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, Washington State Department of Ecology, and Washington State Department of Fish and Wildlife representatives.

Specific to the Section 4(f) resources, FHWA and WSDOT has closely coordinated with the SHPO, the cities of Fife, Puyallup, and Milton, Pierce County, and the Puyallup Tribe. A series of meetings was held in the spring and summer of 2004 with the cities and county for the expressed purpose of exploring joint development for the Fife Soccer Complex and Interurban Trail, providing access to the City of Fife Lower Hylebos Nature Park, and mitigating construction impacts to the Puyallup Riverfront Trail.

update

The Memorandum of Agreement (MOA) prepared to satisfy Section 106 requirements has been developed in cooperation with the SHPO and will be filed with the Advisory Council on Historic Preservation at the conclusion of the consultation. By circulation of this draft Section 4(f) Evaluation, comments will be sought from the U.S. Department of the Interior as required in 23 CFR §771.135(i).

Agency correspondence and the draft MOA comprise Appendix I.

Draft Section 4(f) Evaluation

SR 167 Puyallup to SR 509

Pierce County, WA

August 2005

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

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Federal Highway Administration
Washington Division

DRAFT SECTION 4(F) EVALUATION

SR 167 PUYALLUP TO SR 509
TIER II EIS
PIERCE COUNTY, WASHINGTON

Submitted Pursuant to 42 U.S.C. 4332(2)(c) and 49 U.S.C. 303

by

U.S. Department of Transportation
Federal Highway Administration

Washington State Department of Transportation

August 2005

August 16, 2005
Date of Approval

Daryl L. Hoglund
For FHWA

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SR 167 Puyallup to SR 509 Tier II EIS
Draft Section 4(f) Evaluation

Introduction

The Washington State Department of Transportation (WSDOT) is planning the completion of the SR 167 freeway between the SR 509 freeway in the City of Tacoma and SR 161 (North Meridian) in north Puyallup. The project would be constructed within Pierce County, Washington, in the cities of Fife, Puyallup, Edgewood, Milton, and Tacoma. The new freeway would replace the existing SR 167 arterial route between the I-5 Bay Street interchange and Puyallup via River Road and North Meridian. The freeway is designed as four lanes, plus inside HOV lanes to be constructed between I-5 and SR 161 at a future date. Figure 1 is a project vicinity map; Figures 2 and 3 identify the 4(f) resources evaluated in this report that are within the proposed corridor.

Section 4(f) Resources

Section 4(f) of the Department of Transportation Act of 1966, codified in Federal law at 49 U.S.C. §303, declares that "[i]t is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites."

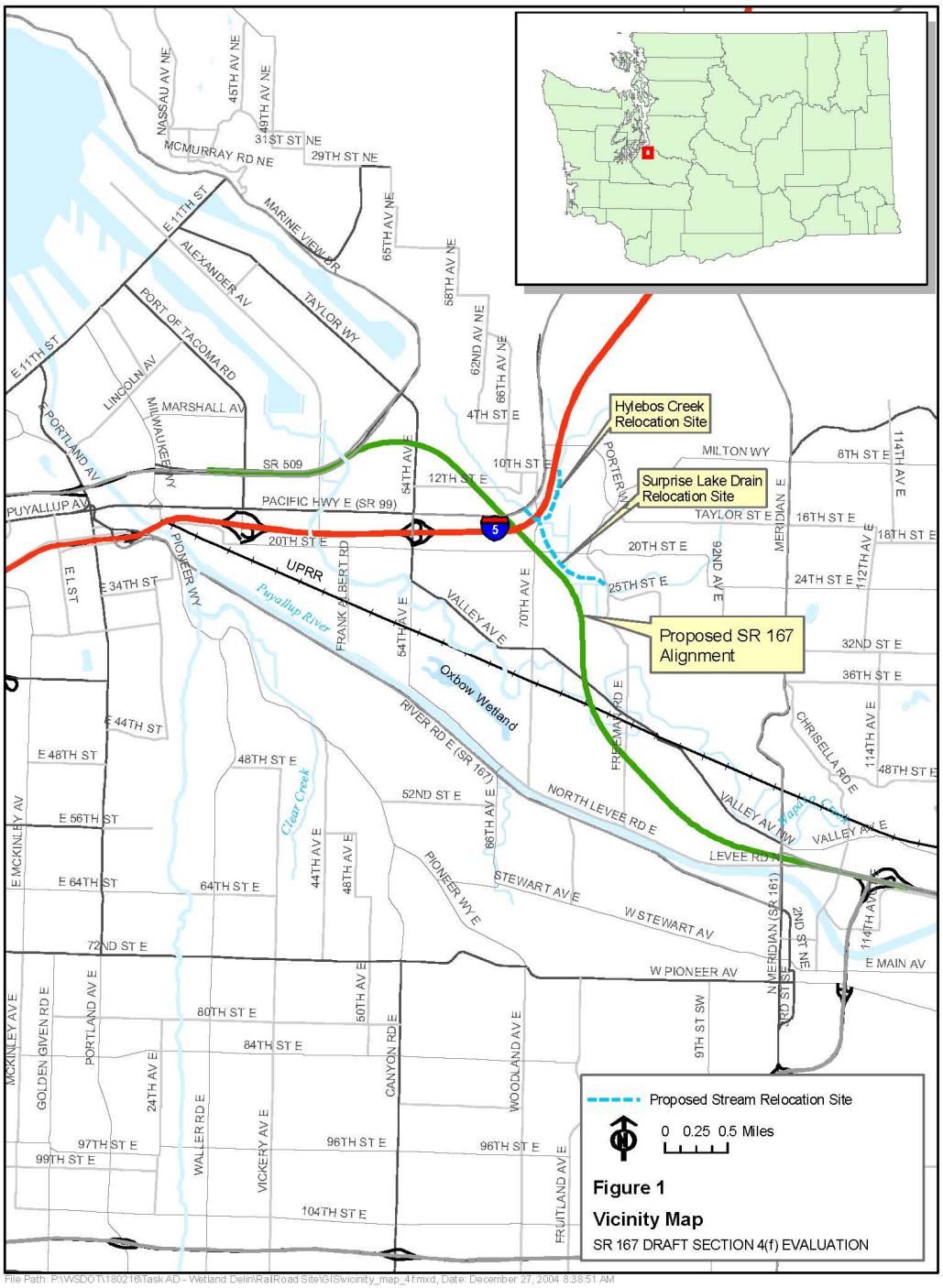
Section 4(f) specifies that "[t]he Secretary [of Transportation] may approve a transportation program or project … requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State, or local significance (as determined by the Federal, State, or local officials having jurisdiction over the park, area, refuge, or site) only if -

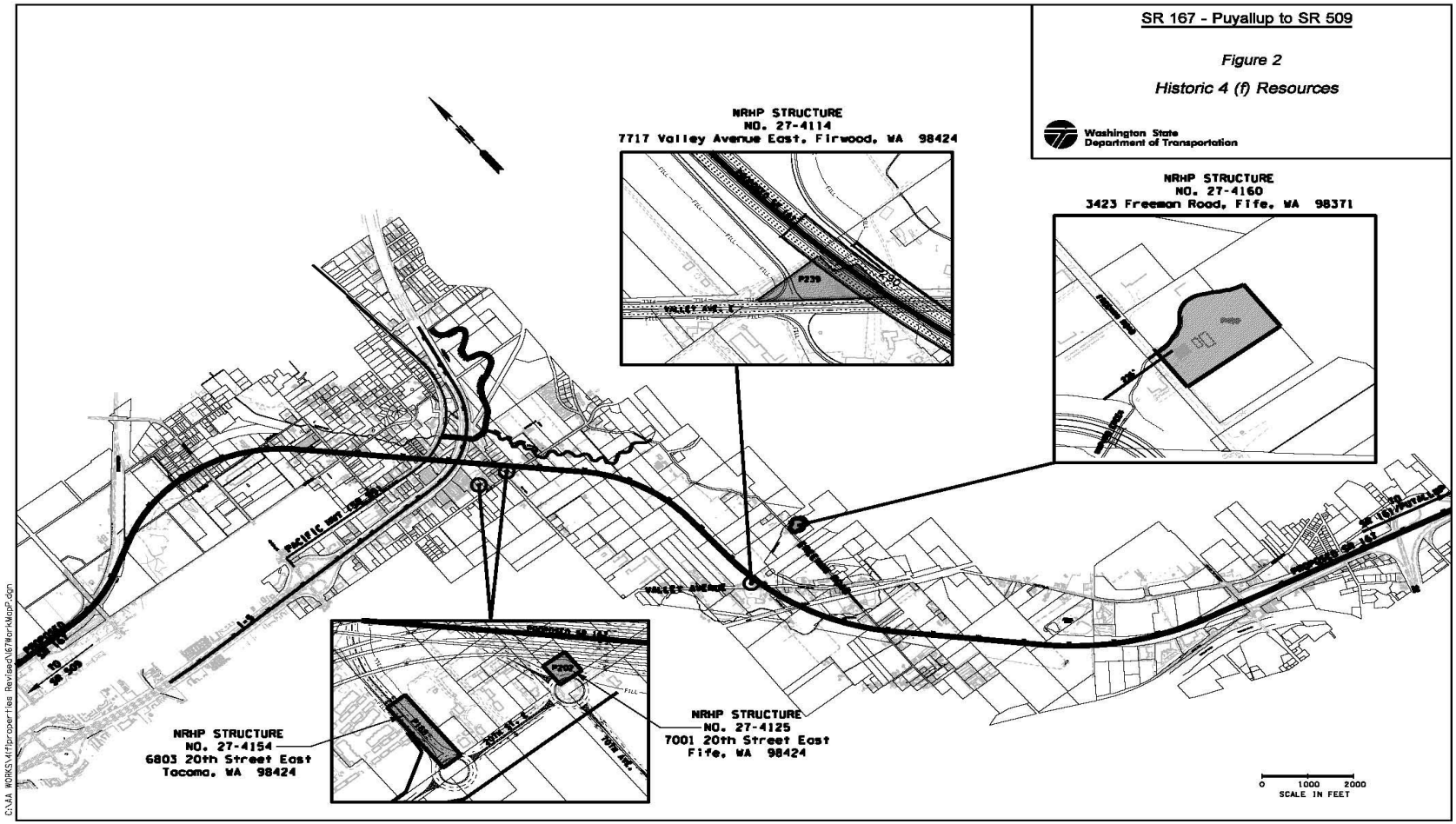
(1) There is no feasible and prudent alternative to using that land; and

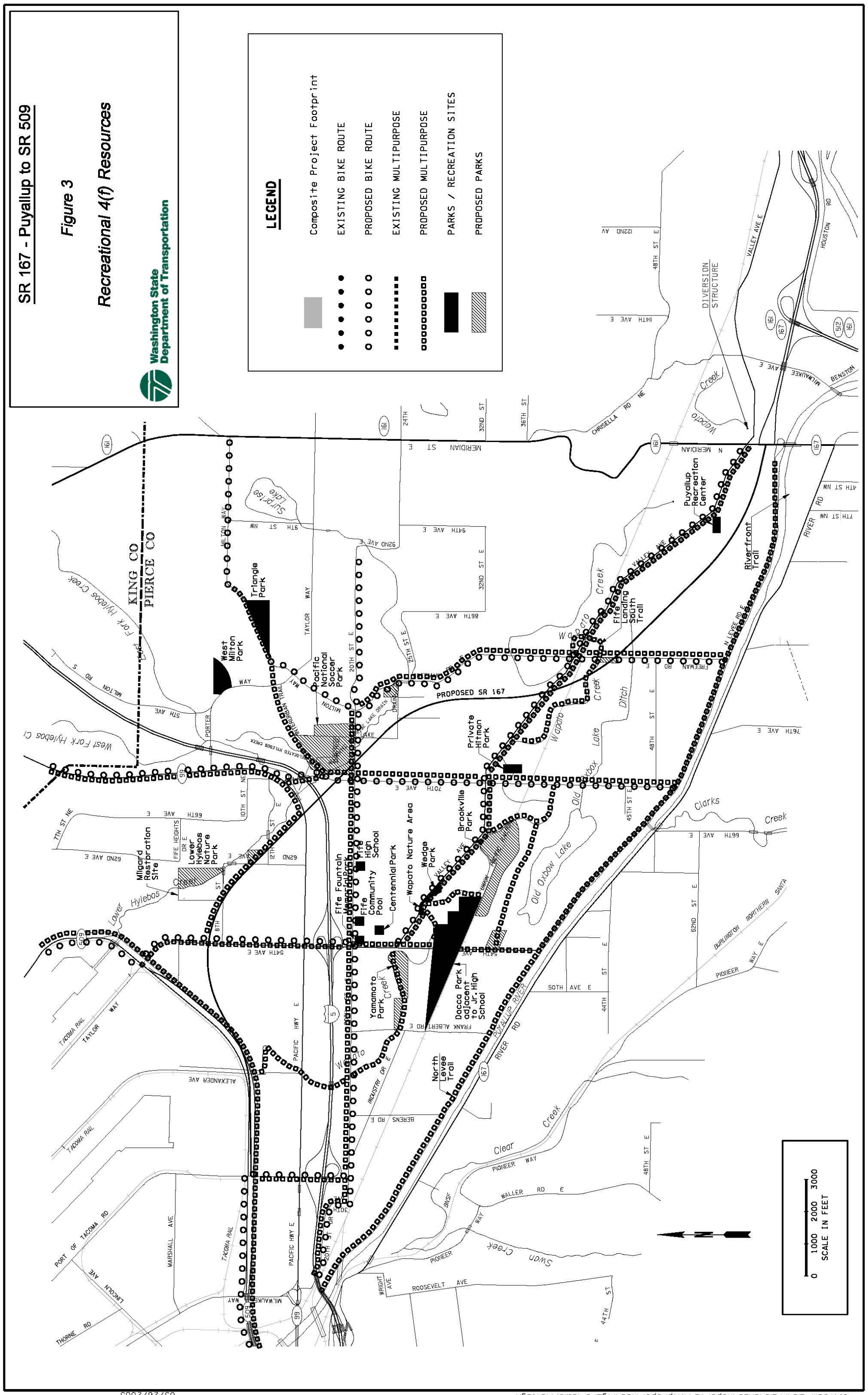
(2) The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use."

"Use" of a Section 4(f) property is usually considered to occur when land from a 4(f) resource is permanently incorporated into a transportation facility or when there is a temporary occupancy of land from a 4(f) resource which results in an adverse effect upon the resource contrary to the Section 4(f) statutory intent to preserve these properties. However, use of a Section 4(f) resource is not limited to property or easement acquisition under the statute.

"Constructive use" under Section 4(f) is defined as project proximity impacts (e.g. noise, access, vibration, aesthetic, ecological intrusion) which are so severe that they "substantially impair" or diminish the activities, features, or attributes that qualify a resource for protection under section 4(f). FHWA has determined that the threshold for constructive use is proximity impacts which substantially impair the function, integrity,


Hylebos Creek Relocation Site
Surprise Lake Drain Relocation Site
Proposed SR 167 Alignment
Proposed Stream Relocation Site
0 0.25 0.5 Miles
Figure 1
Vicinity Map
SR 167 DRAFT SECTION 4(f) EVALUATION
File Path: P:\WSDOT\180216\Task AD - Wetland Delin\RailRoad Site\GIS\vicinity_map_4f.mxd, Date: December 27, 2004 8:38:51 AM
3


SR 167 - Puyallup to SR 509
Figure 2
Historic 4 (f) Resources
Washington State Department of Transportation
NRHP STRUCTURE
NO. 27-4114
7717 Valley Avenue East, Firwood, WA 98424
NRHP STRUCTURE
NO. 27-4160
3423 Freeman Road, Fife, WA 98371
NRHP STRUCTURE
NO. 27-4154
6803 20th Street East
Tacoma, WA 98424
NRHP STRUCTURE
NO. 27-4125
7001 20th Street East
Fife, WA 98424
PACIFIC HWY. E.
VALLEY AVENUE
0 1000 2000
SCALE IN FEET


SR 167 - Puyallup to SR 509
Figure 3
Recreational 4(f) Resources
Washington State Department of Transportation
LEGEND
Composite Project Footprint
EXISTING BIKE ROUTE
PROPOSED BIKE ROUTE
EXISTING MULTIPURPOSE
PROPOSED MULTIPURPOSE
PARKS / RECREATION SITES
PROPOSED PARKS
KING CO
PIERCE CO
PROPOSED SR 167
Triangle Park
West Milton Park
Pacific National Soccer Park
Private Hitman Park
Brookville Park
Wedge Park
Wapato Nature Area
Centennial Park
Fife Community Pool
Fife High School
Fife Fountain Memorial Park
Yamamoto Park
Dacca Park adjacent to Jr. High School
North Levee Trail
Riverfront Trail
Fife Landing South Trail
Puyallup Recreation Center
Milgard Restoration Site
Lower Hylebos Nature Park
DIVERSION STRUCTURE
0 1000 2000 3000
SCALE IN FEET
4 (f) Evaluation

use, access, value or setting of a park, recreation area, waterfowl or wildlife refuge, or historic site.

Supporting information must demonstrate that there are unique problems or unusual factors involved in the use of alternatives that avoid use of 4(f) resources or that the cost, social, economic, and environmental impacts, or community disruption resulting from such alternatives reach extraordinary magnitudes or result in unique problems.

Section 4(f) further requires consultation with the Department of the Interior and, as appropriate, the involved offices of the Departments of Agriculture and Housing and Urban Development in developing transportation projects and programs which use lands protected by Section 4(f).

Section 6(f) Resources
Recreation resources that are acquired or improved with Land and Water Conservation Fund monies are also protected under Section 6(f) of the Land and Water Conservation Fund Act as stated in the FHWA Technical Advisory T6640.8A:

> Section 6(f) directs the Department of the Interior (National Park Service) to assure that replacement lands of equal value, location, and usefulness are provided as conditions to approval of land conversions. Therefore, where a Section 6(f) land conversion is proposed for a highway project, replacement land will be necessary. Regardless of the mitigation proposed, the draft and final Section 4(f) evaluations should discuss the results of coordination with the public official having jurisdiction over the Section 4(f) land and document the National Park Service's position on the Section 6(f) land transfer, respectively.

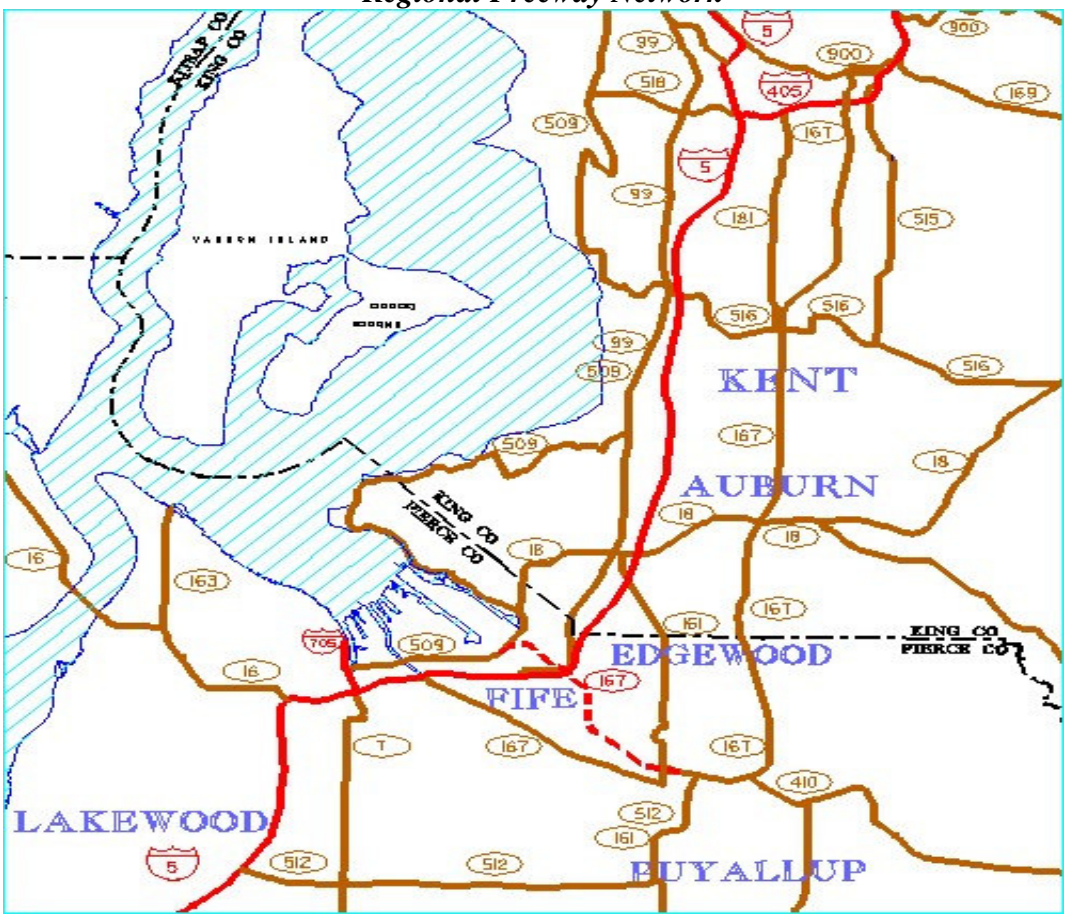
There are no Section 6(f) resources impacted by this project.

Description of the Proposed Action

Project Background
In the 1950's, a regional highway plan was developed which included SR 167 from Renton to I-5. After issuance of a Design Report and Access Report, work on the project in the Puyallup Valley was halted in the late 1970's because of uncertainty regarding ownership of the Puyallup Tribal lands in the area. In the late 1980's the SR 167 freeway was completed from I-405 in Renton to SR 512 in Puyallup. The tribal ownership issue was resolved in 1989, allowing the SR 167 extension planning to move forward. In 1990 the Washington State Legislature provided funds for the completion of the SR 167 project.

At the beginning of the EIS preparation in 1990, FHWA and WSDOT decided to tier the EIS process into two steps as permitted in the federal guidelines under the National Environmental Policy Act (NEPA). The Tier I EIS would evaluate different corridor options and select a preferred corridor and interchange locations. The Tier II EIS would result in selection of a preferred design and evaluation of interchange options within the

Regional Freeway Network



selected corridor. In both cases, the selection process involved evaluating the environmental consequences of different alternatives and identifying ways to avoid, minimize, or mitigate the environmental impacts.

NEPA regulations at 23 CFR §771.135(o) address the analysis required by Section 4(f) in a tiered EIS:

> (1) When the first-tier, broad-scale EIS is prepared, the detailed information necessary to complete the section 4(f) evaluation may not be available at that stage in the development of the action. In such cases, an evaluation should be made on the potential impacts that a proposed action will have on section 4(f) land and whether those impacts could have a bearing on the decision to be made. A preliminary determination may be made at this time as to whether there are feasible and prudent locations or alternatives for the action to avoid the use of section 4(f) land. This preliminary determination shall consider all possible planning to minimize harm to the extent that the level of detail available at the first-tier EIS stage allows. It is recognized that such planning at this stage will normally be limited to ensuring that opportunities to minimize harm at subsequent stages in the development process have not been precluded by decisions made at the first-tier stage. This preliminary determination is then incorporated into the first-tier EIS.

(2) A section 4(f) approval made when additional design details are available will include a determination that: (i) The preliminary section 4(f) determination made pursuant to paragraph (o)(1) of this section is still valid; and (ii) The criteria of paragraph (a)[1] of this section have been met.

Tier I FEIS and ROD

Development of the Tier I Draft EIS began in 1990 with a public review process. The Tier I EIS evaluated three corridors and a no build alternative after initially considering seven preliminary alternative corridor locations. The Tier I Draft EIS was published in June of 1993 and a public hearing was held on July 15, 1993. Subsequently, FHWA required WSDOT to prepare a Major Investment Study (MIS), completed in October 1995, which evaluated the effectiveness of four alternatives. The three corridor alternatives presented in the Tier I EIS avoided then identified 4(f) resources. Alternative 2 had the best mix of features for avoiding, minimizing, and mitigating environmental impacts while still meeting the purpose and need for the project. Therefore, Alternative 2 was selected as the preferred corridor in the Tier I Final EIS and was the basis for the Build Alternative studied in the Tier II Draft EIS. The Tier I Final EIS was published in April 1999 and the Record of Decision was issued by FHWA in June 1999.

Tier II DEIS

The Tier II Environmental Impact Statement (EIS) continues the environmental review process begun in Tier I under both NEPA and the State Environmental Policy Act (SEPA). The Tier II Draft EIS was circulated for public review in February 2003. It included the complete description of the proposed facility and the resulting impacts to cultural resources and the environment, conceptual mitigation plans resulting from those impacts, and identified all necessary environmental permits. Copies of the Tier II Draft EIS are available for review at local libraries or by request from the Washington State Department of Transportation.

One prehistoric site and four Craftsman style homes eligible for the National Register of Historic Places (NRHP) were identified in the Tier II Draft EIS. Subsequent to public review, it was determined that additional analysis of the corridor was necessary. Elements of the project, such as a proposed wetland mitigation site (comprising of approximately 200 acres) and areas for the proposed Park and Ride facilities were researched and one additional historic property, a dairy farm, was identified. On June 15, 2004, the Office of Archeological and Historic Preservation (OAHP) concurred that 64 surveyed resources are not eligible for the NRHP, and five historical resources and 1 archeological site were determined to be eligible for the NRHP. Those historical 4(f) resources are described in this draft Section 4(f) evaluation.

[1] 23 C.F.R. 771.135(a)(l) The Administration may not approve the use of land from a significant publicly owned public park, recreation area, or wildlife and waterfowl refuge, or any significant historic site unless a determination is made that:
(i) There is no feasible and prudent alternative to the use of land from the property; and
(ii) The action includes all possible planning to minimize harm to the property resulting from such use.
(2) Supporting information must demonstrate that there are unique problems or unusual factors involved in the use of alternatives that avoid these properties or that the cost, social, economic, and environmental impacts, or community disruption resulting from such alternatives reach extraordinary magnitudes.

This Draft Section 4(f) Evaluation will be circulated as a separate, stand alone, document. The Tier II Final EIS is currently being prepared, and the Final Section 4(f) Evaluation will be included in it.

Purpose and Need
The purpose of the proposed project is to:
- Improve regional mobility of the transportation system;
- Serve multimodal local and port freight movement and passenger movement between the Port of Tacoma, the new SR 509 freeway, and the I-5 corridor and the Puyallup termini of SR 167, SR 410, and SR 512;
- Reduce congestion and improve safety;
- Provide improved system continuity between I-5 and the SR 167 corridor; and
- Maintain or improve air quality in the corridor to ensure compliance with the current State Implementation Plan (SIP) and all requirements of the Clean Air Act (CAA).

The existing non-freeway segment of SR 167 from I-5 to the Puyallup area is on surface streets and includes a circuitous route through Puyallup, via River Road and North Meridian. The high levels of congestion at intersections and the frequency of intersecting driveways contribute to relatively high accident ratios compared to statewide averages. Traffic projections for the year 2030 indicate the capacity problems at intersections will increase if action to complete the freeway is not taken.

Trucks transporting freight currently travel through the City of Fife via Valley Avenue East, 70th Avenue East, and 54th Avenue East, or climb existing steep grades on SR 18 near I-5. Several intersections along these routes operate at over-capacity conditions during peak traffic, resulting in traffic delays and congestion. The Port of Tacoma projected truck traffic to and from the Port to double from 300,000 to 600,000 trucks per year by the year 2014 (Tier I EIS, 1999). Anticipated problems include more congestion-related delays in freight transport and incompatibility of heavy truck use on residential surface streets creating unsafe conditions.

Alternatives and Options

Introduction
Several corridor alternatives and a no action alternative were evaluated in the Tier I EIS. Corridor 2, which was selected as the preferred alternative, provided a corridor within which a new limited access freeway connecting SR 509 to SR 167 near Puyallup and interchanges at I-5 and Valley Avenue could be configured.

The Tier II EIS proposes two alternatives, a no build and a build alternative.

No Build Alternative
Under the “no build” alternative, the SR 167 freeway will terminate at North Meridian (SR 161), and the non-freeway SR 167 will continue to I-5 via North Meridian and River Road where it will terminate at the Portland Avenue/Bay Street interchange in Tacoma.

The corridor would remain in the present state except for minor improvements and maintenance. Hylebos Creek and Surprise Lake Drain will not be relocated. Riparian restoration will not occur on Hylebos Creek, Surprise Lake Drain, or Wapato Creek. Pierce County and the Cities of Fife, Tacoma, Puyallup, Milton, and Edgewood will continue with their programmed and planned improvements to the local transportation system. SR 167 Tier II DEIS Section 3.14, Transportation, identifies some of the roadway projects that are planned. The types of projects include widening roads, signalizing intersections, adding bicycle and pedestrian facilities, developing park and ride facilities, and improving capacity.

WSDOT will also continue making improvements to its facilities in the study area under the No Build Alternative. These facilities include SR 509, SR 705, SR 99, SR 161, SR 512, and the existing SR 167. The types of improvements include adding HOV lanes, adding collector/distributor lanes, improving on and off ramps, adding transportation demand management systems, and upgrading drainage systems.

Build Alternative

The build alternative consists of a four-lane freeway (four general purpose lanes) with two HOV lanes between I-5 and SR 161. The build alternative includes freeway-to-freeway connections with SR 509, SR 167, and I-5. Also, it includes new local access interchanges at 54th Avenue East and Valley Avenue and completion of the SR 161 interchange. As part of the SR 161 interchange, the existing eastern bridge over the Puyallup River will be replaced and the existing western bridge will be widened. The Build Alternative also results in the relocation of a part of Hylebos Creek and Surprise Lake Drain. The relocated channel designs will reduce flooding and improve fish and wildlife habitat. A riparian restoration area is proposed for existing Hylebos Creek between SR 99 and 8th Avenue, for the relocated Hylebos Creek and Surprise Lake Drain east of I-5, and at Wapato Creek near Freeman Road and Valley Avenue.

A conceptual stormwater treatment plan has been developed for the project.

Mainline Description

The proposed SR 167 begins as a four-lane limited access highway where it connects to the existing SR 509 at the Port of Tacoma Road/SR 509 Interchange. The location of the connection and design features are dictated by the location of SR 509 and the SR 167 alignment as approved in the Tier I EIS. The two-lane southbound SR 167 will directly connect to the southbound lane of SR 509. The two-lane northbound SR 509 will directly connect to the two-lane northbound SR 167. There will be single-lane ramps from southbound SR 167 to SR 509 North Frontage Road and from northbound SR 167 to SR 509 South Frontage Road.

If necessary, as part of the SR 509 connection, one new bridge over Alexander Avenue will be built. This bridge will span Wapato Creek and the South Frontage Road. The existing railroad crossing of SR 509 will be relocated. A new railroad bridge over Wapato Creek will be constructed south of the South Frontage Road. A new structure

(potentially a bridge or 3-sided culvert) will replace the existing 110-feet long by 8-feet diameter open bottom arched culvert over Wapato Creek on North Frontage Road.

The four-lane mainline alignment continues easterly on embankment until it crosses 54th Avenue East in the vicinity of 8th Street East. An interchange providing access to and from the east is proposed at 54th Avenue East. Two interchange options were developed and are discussed below. The mainline continues on an embankment from 54th Avenue East until just past 8th Street East where the mainline separates and northbound lanes ascend on an elevated structure while southbound lanes remain on embankment until after crossing 12th Street East. Local access is maintained as mainline SR 167 crosses 12th Street East on structure.

Both northbound and southbound lanes cross SR 99 on separate elevated structures continuing on to the freeway-to-freeway connection with I-5. The archeological site is in the vicinity of these structures.

Bridges over 54th Avenue East and 12th Street East will be constructed. An existing culvert at the 12th Street East crossing of Hylebos Creek will be replaced with a structure. Riparian restoration along Hylebos Creek will also occur. It will include the removal of residential and commercial buildings near 8th Street East and 62nd Avenue East, the removal of 8th Street East and 62nd Avenue East, east of the new alignment, and the relocation of a drainage ditch. The proposed Lower Hylebos Nature Park, as shown on Figure 3, is in the vicinity of the proposed riparian restoration area and the existing Milgard Restoration Site.

Due to complexity of I-5 interchange and limited solutions for these freeway-to-freeway connections, only one design option could be developed to reasonably meet the needs at this location. The interchange will consist of three elevated levels of roadway structures extending up to 80 feet above ground. The SR 167 mainline would be elevated on structure over 12th Street East, Pacific Highway (SR 99), Interstate 5, proposed relocated 20th Street East and 70th Avenue East. Two historic residences are in the vicinity of the proposed changes to existing 20th Street East and 70th Avenue East.

Hylebos Creek will be relocated as part of mitigation for the fill of Hylebos Creek due to HOV improvements to I-5. The creek will be relocated to the field east of I-5 from its current location adjacent to I-5. Relocation will begin where the creek enters the current I-5 Right Of Way upstream from the proposed interchange and will extend downstream to where it passes underneath SR 99, approximately 4,010 linear feet of channel.

A riparian restoration plan has been developed as part of the project's conceptual stormwater treatment plan that will provide a riparian buffer area around the existing and relocated Hylebos Creek. It will also provide a separated non-motorized path from 54th Street E. to SR 99. The required 200 – 400 foot stream channel and riparian buffer area intersects with and is adjacent to Interurban Trail and the planned Pacific National Soccer Park.

Surprise Lake Drain will also be relocated as part of the I-5 interchange improvements. South of I-5, Surprise Lake Drain will relocated and restored to a more natural alignment. The existing Surprise Lake Drain channel, which currently bisects the planned Pacific National Soccer Park, will be moved to agricultural fields east of the new SR 167 mainline. See Figure 3.

Riparian restoration, part of the project's conceptual stormwater treatment plan, is proposed along Wapato Creek at Valley Avenue Interchange. Restoration activities include riparian plantings, fill removal, impervious surface removal from the floodplain, and the potential removal of six undersized crossing structures. A trail, the planned Fife Landing South Trail, is currently proposed to follow Wapato Creek in the vicinity of the project's planned restoration activities.

The mainline continues to the southeast parallel with Valley Avenue with two general purpose lanes in each direction and one HOV lane in each direction. Washington State Patrol truck weigh station facilities are proposed for each direction of travel east of the Valley Avenue interchange. The mainline would pass to the south of the Puyallup Recreation Center. WSDOT is proposing another cross connection over SR 167 with the preferred Urban interchange option for SR 161. Three design options have been developed for consideration at this interchange. The mainline continues towards the terminus at the existing SR 161/SR 167 interchange.

There are two existing bridges over the Puyallup River that carry SR 161 traffic. The southbound traffic travels over a concrete structure (eastern bridge) constructed in 1971. The northbound traffic travels over a steel structure (western bridge) constructed in 1951. The concrete bridge has a pier within the ordinary high watermark of the river while the steel bridge spans the river. The steel bridge is approximately 3 feet lower than the concrete bridge. Neither bridge meets current design standards.

As part of the SR 161/SR 167 interchange improvements, the existing steel bridge will removed and replaced with a bridge that may span the Puyallup River. The project currently estimates a maximum of four piers for the new bridge will be located within the ordinary high water mark of the river. The concrete bridge will be widened approximately seven feet to provide shoulders and a bike lane. The Riverfront Trail currently passes under the steel and concrete Puyallup River bridges.

Interchange Descriptions

There are three interchanges with multiple design options under consideration. They are at 54th Avenue East, Valley Avenue, and SR 161 (North Meridian).

54th Avenue Partial Interchange

There are two options for the partial interchange at this location. In both options, the ramps are single lane and provide only southbound off and northbound on access to SR 167. Connections will be provided for bicycle route continuity. There are no 4(f) resources in the vicinity of this proposed interchange.

Valley Avenue Interchange

Three design options were developed for this interchange location. For each, the SR 167 mainline is elevated over Valley Avenue, Union Pacific Railroad, Wapato Creek, and Freeman Road. Under all three options, WSDOT will widen Valley Avenue from two lanes to five lanes from the northbound off ramp to the intersection of Freeman Road East. There are two historic residences in the vicinity of this proposed interchange.

SR 161 / SR 167 Interchange

An existing connection here provides the southern terminus for the freeway segment of SR 167 between Puyallup and Renton. With the proposed SR 167, this connection will become a full interchange. Three design options have been developed. In each design option, the SR 167 mainline will be elevated over SR 161 (North Meridian). In all three options, the existing steel bridge over the Puyallup River (northbound SR 161) will be replaced. The existing concrete bridge (southbound SR 161) will be widened. There are no 4(f) resources in the vicinity of this proposed interchange.

Description of Section 4(f) Resources

Section 4(f) resources include historic sites and publicly owned parks, recreation areas, and wildlife and waterfowl refuges. The proposed action will not require the use of any wildlife and waterfowl refuges or existing public parks.

Historic Resources

Historic resources are subject to protection under Section 4(f) regulations if they are on or eligible for listing on the NRHP. Determination of eligibility is made by the Federal Highway Administration (FHWA). FHWA has delegated this authority to the WSDOT. WSDOT made the determinations of eligibility based on recommendations in the Cultural Resources report prepared to satisfy Section 106 requirements (summarized in the EIS). There are four National Register Criteria for Evaluation that an eligibility determination is based on: association with significant events (Criterion A); association with significant people (Criterion B); possession of significant design or construction (Criterion C); and association with information important in prehistory or history (Criterion D).

Section 4(f) applies to all archaeological sites on or eligible for inclusion on the National Register and which warrant preservation in place (including those discovered during construction). Section 4(f) does not apply if FHWA, after consultation with the State Historic Preservation Officer (SHPO) and the ACHP, determines that the archaeological resource is important chiefly because of what can be learned by data recovery (even if it is agreed not to recover the resource) and has minimal value for preservation in place.

The Tier II Draft EIS (pages 3-314, 3-315) described one archaeological site along SR 99 in the vicinity of the I-5 interchange portion of the project as potentially eligible for the

NRHP. It also described 56 historic properties that were inventoried, with 5 appearing eligible for the NRHP. At the time the Draft EIS was published in February 2003, eligibility had not yet been determined by the State Historic Preservation Officer (SHPO). Subsequently more sites were surveyed bringing the total to 70, with one additional potentially eligible for the NRHP. SHPO concurred with the agency eligibility determinations, see Appendix A.

There is potential for additional archeological sites to be discovered during construction. In this case, where preservation of the resource in place is warranted the Section 4(f) process will be expedited. Also, the evaluation of feasible and prudent alternatives will take account of the level of investment already made. The review process, including the consultation with other agencies should be shortened, as appropriate. An October 19, 1980, memorandum with the Heritage Conservation and Recreation Service (now National Park Service) provides emergency procedures for unanticipated cultural resources discovered during construction.

On June 15, 2004, the SHPO concurred that the following resources (Table 1) were eligible for listing in the NRHP, therefore making them potentially subject to protection under Section 4(f) regulations:

Table 1 – Historic Resources Eligible for the NRHP

OAHP[1] Number	Parcel Number[2]	Address	Description
45PI488	(not disclosed)	Along SR 99	Archaeological site
27-4154	P168	6803 20th St. E.	Residence
27-4125	P202	7001 20th St. E.	Residence
27-4114	P239	7717 Valley Ave. E.	Residence
27-4160	P490	3423 Freeman Road	Residence
Fife-A-1	(Baggenstos Farm)	N. Levee Rd.	Farmstead

[1]Office of Archaeology and Historic Preservation
[2]Assigned by WSDOT

Site 45PI488 - This archaeological site is on a privately owned vacant lot located along SR 99. Based on the results of shovel testing performed in October 2000 and January 2001, the site appears to be confined to the southeast portion of the parcel. Limited testing produced two fragments of a formed tool, a charcoal sample, and lithic scatter. The site is considered significant under Criterion D, for it is likely to yield information important to Puyallup River Valley prehistory. It was determined, after consultation with SHPO, that this site has minimal value for preservation in place. Therefore, the archaeological site is not subject to protection under Section 4(f) regulations. This site is not shown on the vicinity map or a site plan in order to protect its integrity.

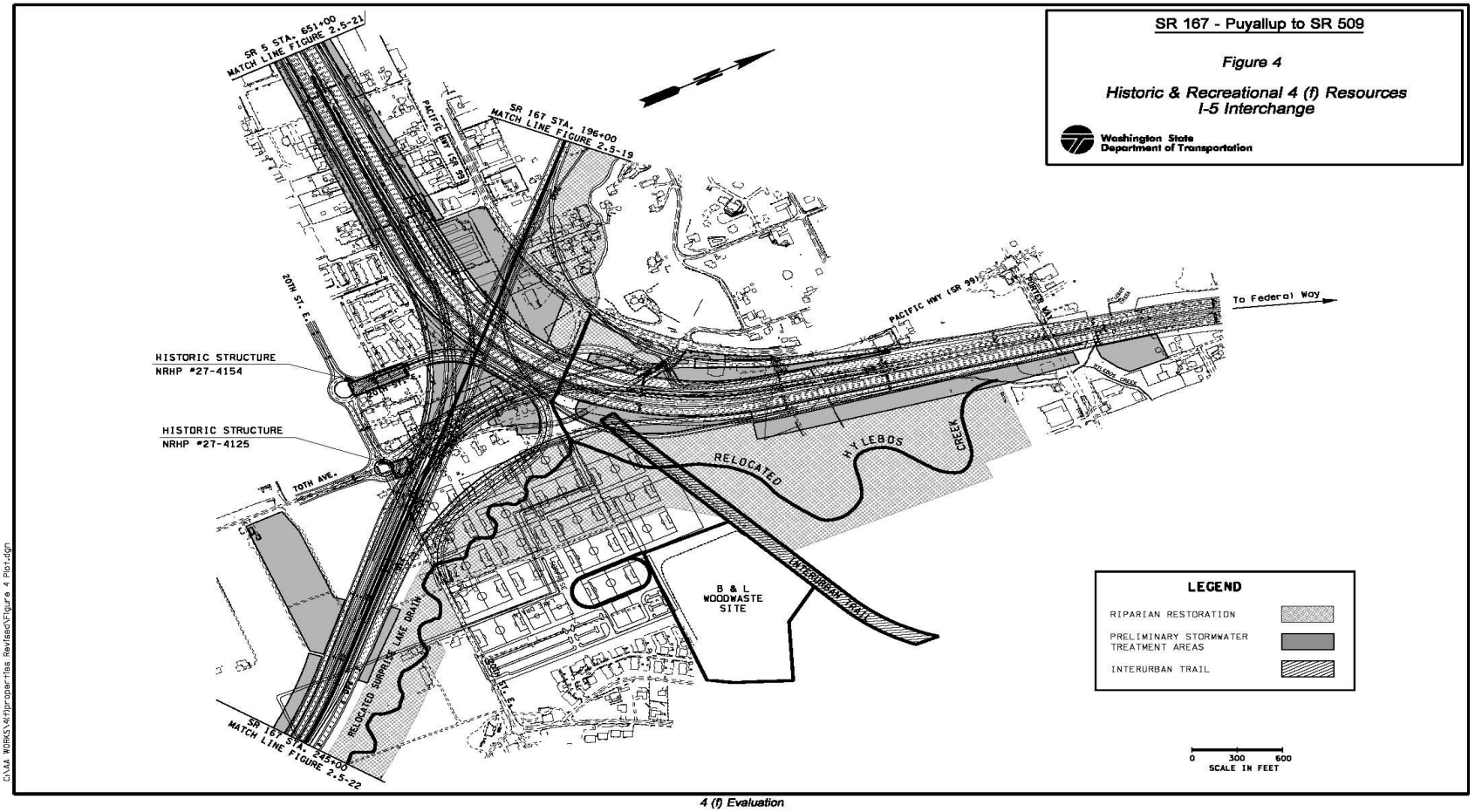
Site 27-4154 – This private residence is located at 6803 20th Street East. Built around 1940, this gable-front bungaloid cottage is in excellent condition and retains its architectural integrity. In addition, its gardens and overall setting further enhance its Craftsman aesthetic. It was determined eligible for the NRHP under Criterion C. See Figures 2 and 4.

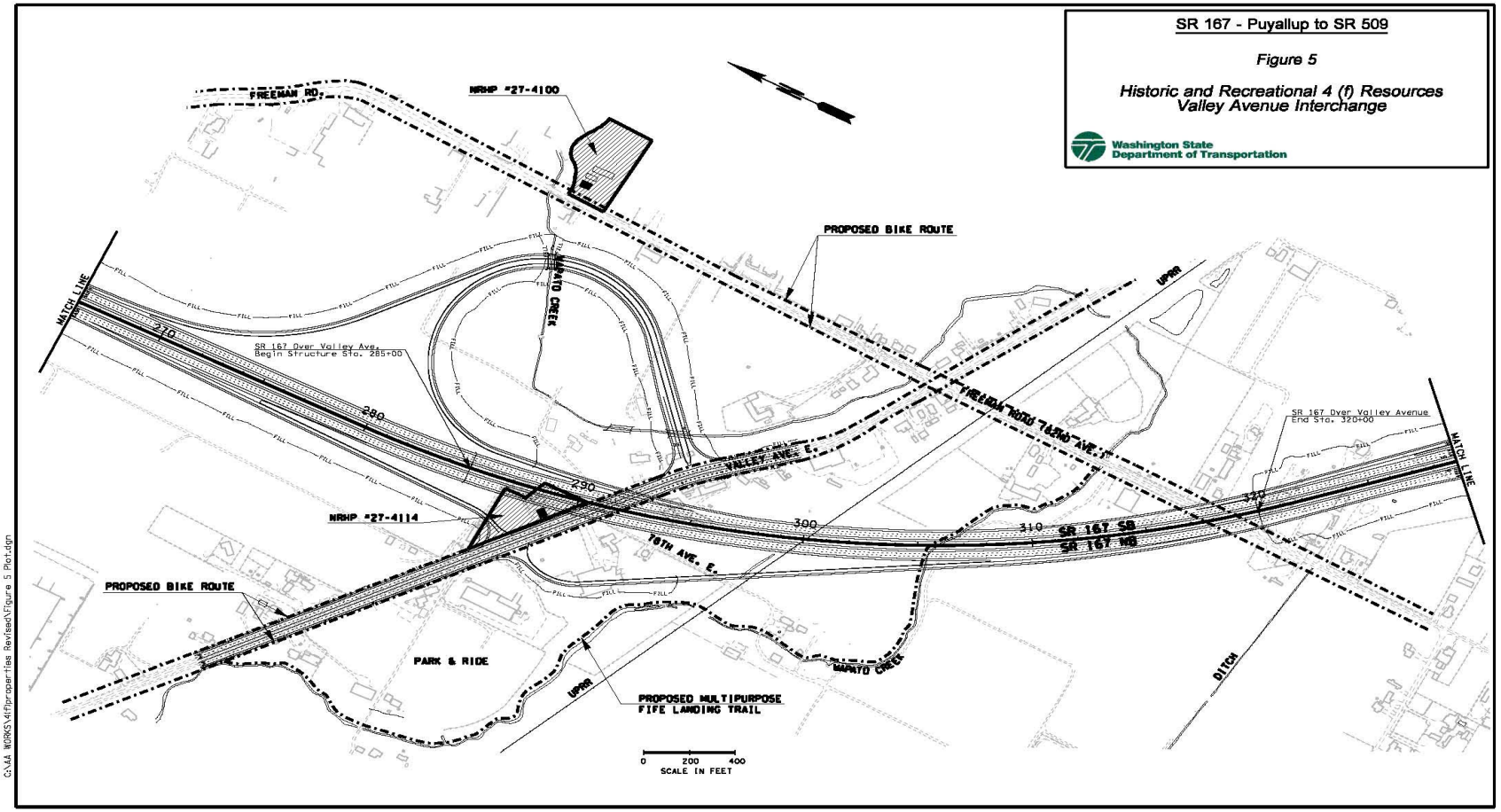
Site 27-4125 – This private residence is located at 7001 20th Street E. It was constructed around 1930, and is a one and one-half story bungalow with a gull-wing dormer and a shed-roof dormer. It retains excellent architectural integrity and is in good to fair physical condition. It was determined eligible for the NRHP under Criterion C. See Figures 2 and 4.

Site 27-4114 – Another private residence, this resource is located at 7717 Valley Avenue E. Built around 1900, this one and one half story bungalow with gull-wing style gable roof has excellent structural integrity, but is in only fair physical condition. It was determined eligible for the NRHP under Criterion C. See Figures 2 and 5.

Site 27-4160 – Built in 1902, this Craftsman style two-story private residence is located at 3423 Freeman Road. It has excellent exterior architectural integrity and is in excellent physical condition. It was determined eligible for the NRHP under Criterion C. See Figures 2 and 5.

Site Fife-A-1 – This property, known as the Baggenstos Farm, is a complex of buildings located at the proposed wetland mitigation site on N. Levee Rd. The buildings, dating to around 1920, include a farmhouse, vehicle garages, and a large barn that adjoins a dairy barn, loafing shed, and milk house. All buildings other than the garages are presently abandoned. The farmhouse retains good integrity of materials and appearance, but has lost its former association with dairy farming. The other buildings have also lost their historic association and function, and exhibit poor integrity. However, this group of buildings still retains a visibly recognizable association with early farming. It was determined eligible for the NRHP under Criterion A.

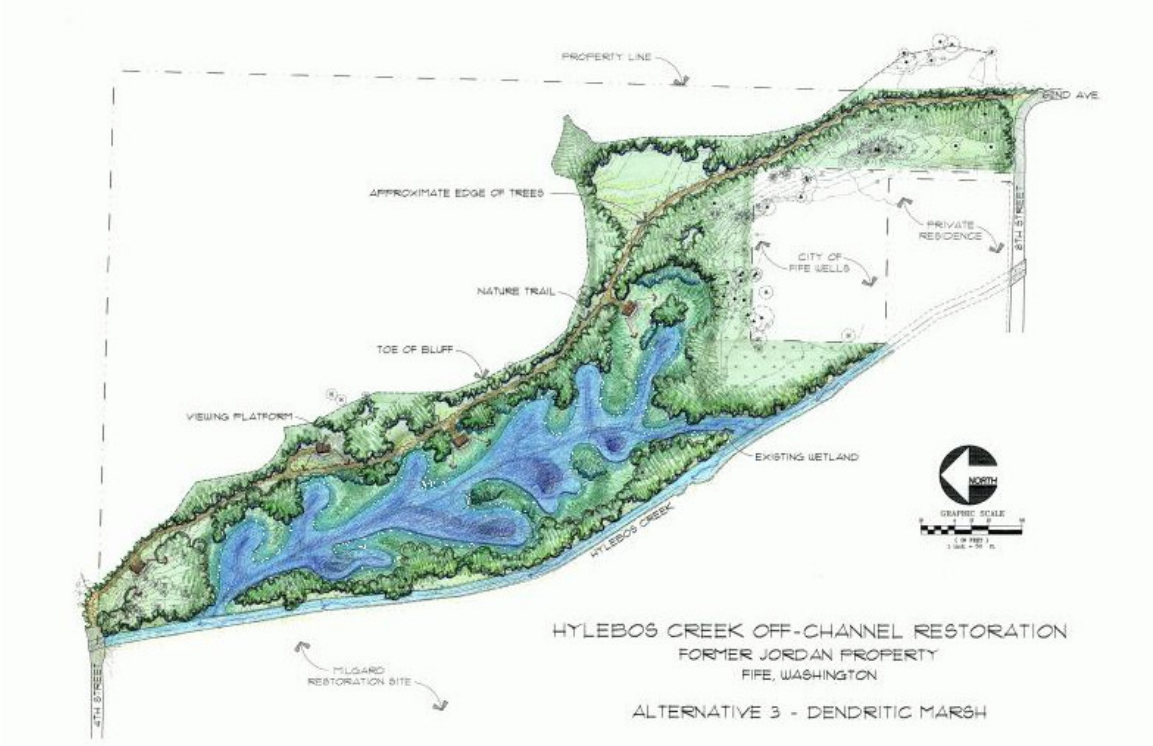

SR 167 - Puyallup to SR 509
Figure 4
Historic & Recreational 4 (f) Resources
I-5 Interchange
Washington State Department of Transportation
SR 5 STA. 651+00 MATCH LINE FIGURE 2.5-21
SR 167 STA. 196+00 MATCH LINE FIGURE 2.5-19
SR 167 STA. 245+00 MATCH LINE FIGURE 2.5-22
PACIFIC HWY (SR 99)
20TH ST. E.
HISTORIC STRUCTURE NRHP #27-4154
HISTORIC STRUCTURE NRHP #27-4125
70TH AVE.
To Federal Way
RELOCATED
H.Y. LEBOS
CREEK
B & L WOODWASTE SITE
INTERURBAN TRAIL
RELOCATED SURPRISE LAKE DRAIN
LEGEND
RIPARIAN RESTORATION
PRELIMINARY STORMWATER TREATMENT AREAS
INTERURBAN TRAIL
0 300 600
SCALE IN FEET
C:\MA WORKS\4f\Improvements Revised\Figure 4 Plot.dgn
4 (f) Evaluation


SR 167 - Puyallup to SR 509
Figure 5
Historic and Recreational 4 (f) Resources
Valley Avenue Interchange
Washington State Department of Transportation
FREEMAN RD.
NRHP #27-4100
PROPOSED BIKE ROUTE
MATCH LINE
SR 167 Over Valley Avg.
Begin Structure Sta. 285+00
270
280
290
300
310
320
SR 167 Over Valley Avenue
End Sta. 320+00
VALLEY AVE. E.
NRHP #27-4114
SR 167 SB
SR 167 NB
18TH AVE. E.
PROPOSED BIKE ROUTE
PARK & RIDE
PROPOSED MULTIPURPOSE
FIFE LANDING TRAIL
UPRR
DITCH
0 200 400
SCALE IN FEET
C:\AA WORKS\4f\properties Revised\Figure 5 Plot.dgn

Recreational Resources

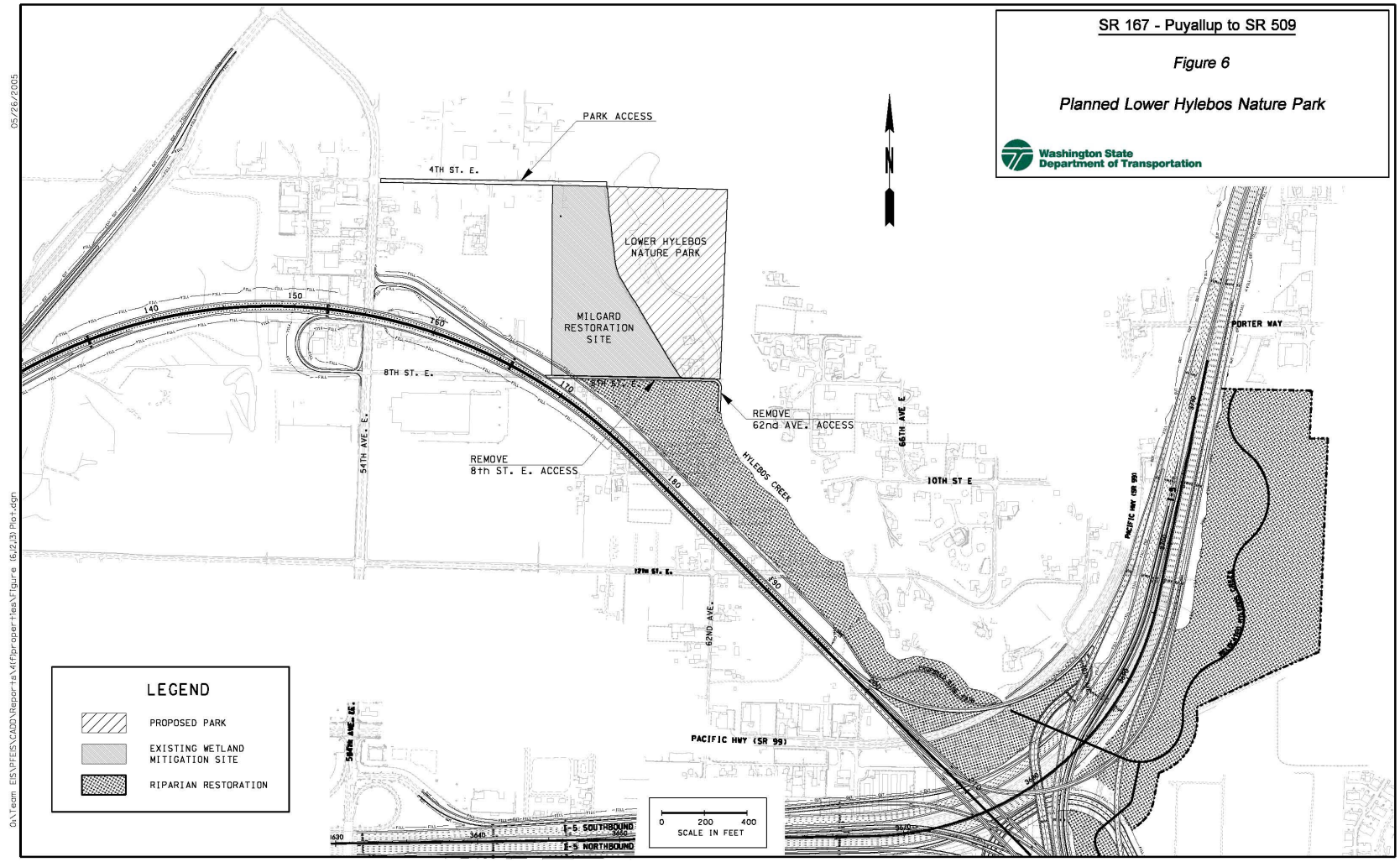
The Tier II Draft EIS described the existing and proposed parks and recreation facilities in the study area. Since publication of the DEIS the following resources have been proposed or identified within the project corridor.

Lower Hylebos Nature Park – The City of Fife, together with the Commencement Bay Natural Resources Trustees, Pierce County, and the National Oceanic and Atmospheric Administration (NOAA), have a proposal to design and construct a restoration project adjacent to a tidally influenced reach of Hylebos Creek. The City of Fife owns the site and development of the site is limited to the usable 7 acres of a 15.3 acre parcel, the remainder being steep cliffs. The proposed restoration project will create off-channel habitat for juvenile salmonids and native plant vegetation. The 4(f) recreational resource is the nature trail, including viewing platforms and interpretive signs, that will be added to provide public access and educational opportunities, and, when completed, will be part of the City of Fife's park system.



NOAA is the lead agency for construction at this site, projected to begin in the summer of 2005. The City of Fife will operate and maintain the site after completion of construction. This year's construction program will include parking at the south entrance, near the intersection of 62nd Avenue and 8th Street East. See Figure 6.

Planned Pacific National Soccer Complex - As early as the year 2000, the City of Fife developed plans for a city owned and run soccer facility. This planned facility would include, at a minimum, 12 lighted soccer fields, training facilities, a specially surfaced field for players with mental or physical disabilities, a headquarters for the Washington State Youth Soccer Association, and 500 – 600 parking spaces. Several locations were



4 (f) Evaluation

analyzed, including a site off North Levee Road and the preferred location on the east side of I-5, just north of 20th Street East and east of 70th Avenue. The development of this complex is a joint project of Fife, the Washington Youth Soccer Association, and the Tacoma-Pierce County Junior Soccer Association. The city currently owns the preferred site, and the associations will build the facilities. Pierce County has partnered with both the City of Fife and the City of Milton to provide parking for both this planned facility and the planned improvements to the Interurban Trail, described below. Funding for this project is contingent on providing the minimum of 12 fields.

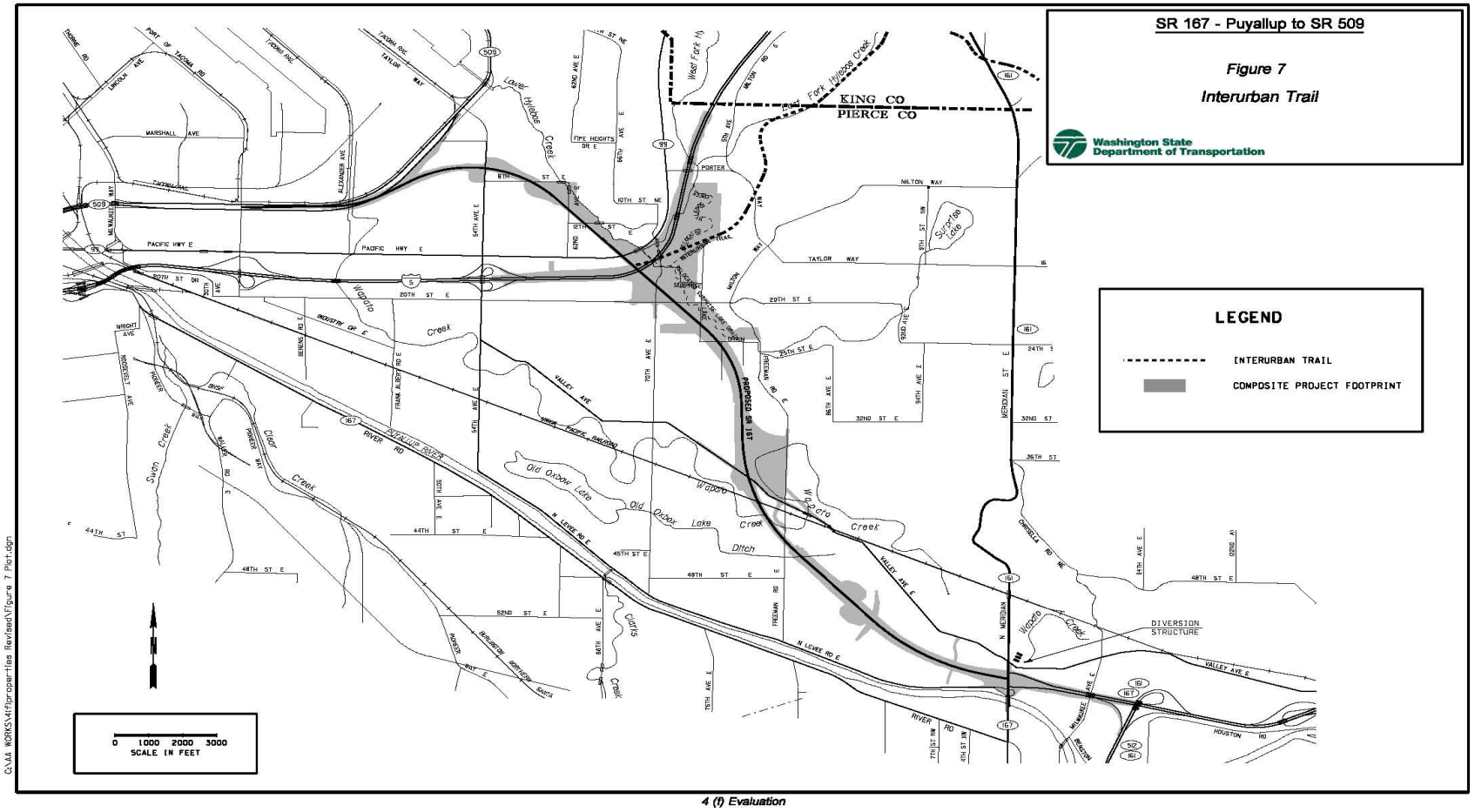
The city initially purchased a 41-acre site off North Levee Road in March of 2001. The North Levee Road site is outside of the project footprint. Further analysis of the site determined that the original land was too costly to develop and too remote from the city commercial district and I-5. The estimated cost of utility extension and access improvements was $8 million. The city is currently evaluating offers for the sale of this property, and the property was analyzed in the *SR 167 Conceptual Mitigation Plan*, June 2004, as an alternative wetland mitigation site.

The preferred 54-acre site adjacent to I-5 was identified by the city in late 2002. Initial plans were presented to the public in June 2003 and showed a combination of turf and grass soccer fields on 3 levels along with associated buildings and parking, Figure 4. Located next to flood-prone Hylebos Creek, the site will be tiered to accommodate flood control. The lower level would flood often during the winter during off-season. The second level would also flood but not as frequently, and the third level, turf fields, would remain dry. The proponents have purchased the property, hired a design firm, and are hoping to begin phased construction as early as 2006.

As a planned facility there is no current usage, but the City of Fife has estimated as high as 50,000 families per month will access the site once operational and open to the public. The soccer complex site is also adjacent to the southern terminus of the planned Interurban Trail, described below.

Planned Interurban Trail – The City of Milton purchased the abandoned Puget Sound Electric railbed as a multi-use bicycle / pedestrian trail route, and has hired a consultant to develop it. They hope to begin construction on a 10-12 foot paved path with 2 foot gravel shoulders within the next year. This 33 acre trail begins by I-5 north of 20th St. E. and east of 70th Ave, adjacent to the City of Fife's planned Pacific National Soccer complex, and proceeds northeasterly (see Figures 4 and 7) for approximately 3 miles.

As a planned facility, there is no estimate of the number of users per year. Construction would be in 3 phases, potentially starting near the proposed I-5 interchange for the SR 167 project.



4 (f) Evaluation

This property will be improved using Washington Wildlife and Recreation Program Funding administered under the Washington State Office of the Interagency Committee (IAC)[2]. By IAC policy, should a sponsor (the City of Milton) convert any portion of the project to a non-recreational use, that conversion must be approved by IAC. The conversion policy can be found in IAC Manual 7 Funded Projects, page 10, March 17, 2004.

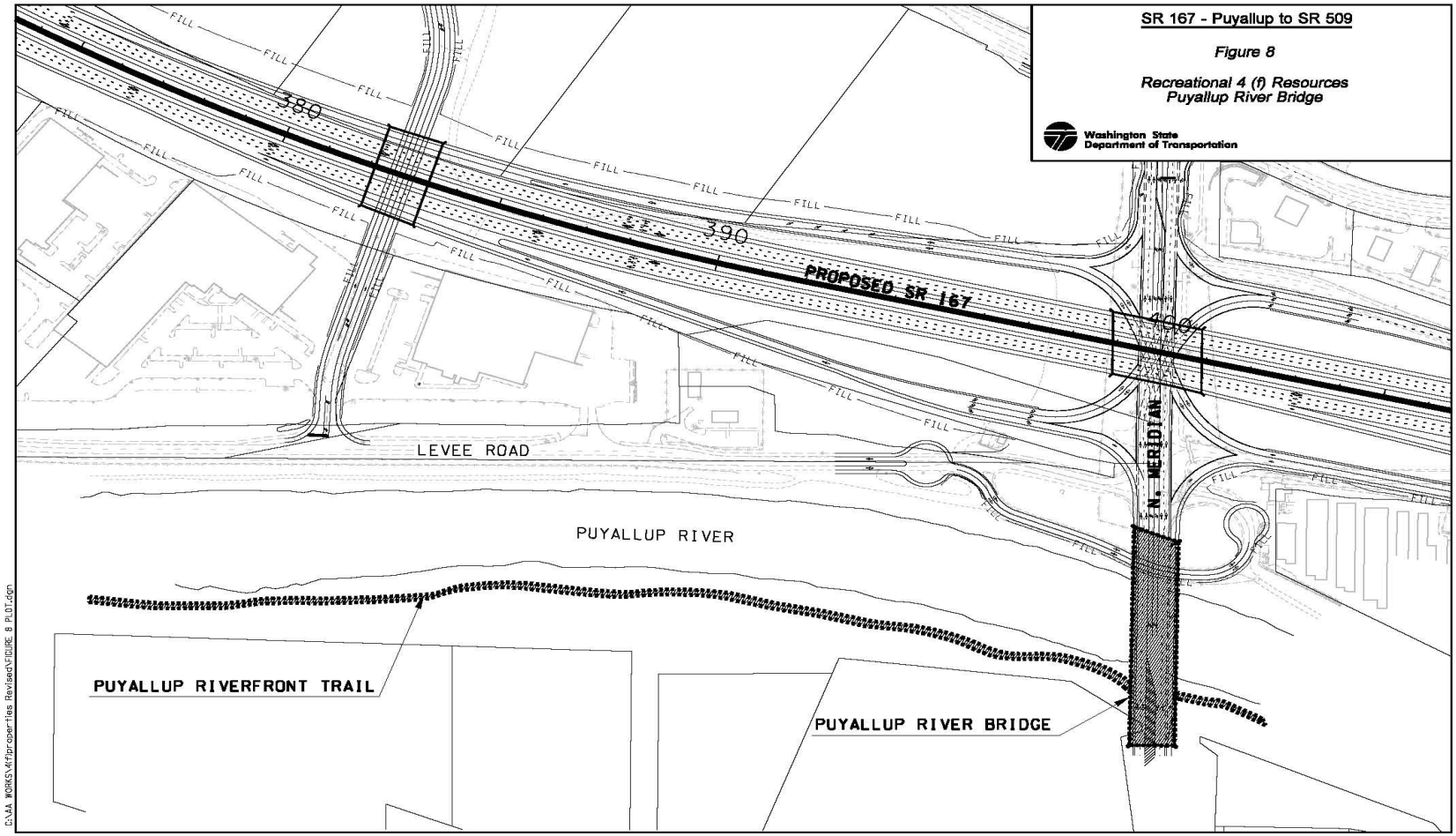
If a portion of the trail will be converted, the City would be required to replace what was converted at their own cost with a replacement of equivalent recreational value, location, and use. Depending on the size of the conversion, it may require IAC Board approval. The City would be required to go through the conversion process as outlined in the manual listed above. To briefly summarize the process, all alternatives to the conversion must be considered. There must be justification to support the proposed replacement, as well as site plans for the conversion site and proposed replacement site.

Riverfront Trail – This existing City of Puyallup multi-use trail extends along the south levee of the Puyallup River from the Milwaukee Avenue Bridge westward to the vicinity of 4th St. NW. It is 10-12 feet wide, paved, and passes beneath the two SR 167 Puyallup River bridges on its own structure. Current usage is estimated at 20 persons per day. See Figure 8.

Planned North Levee Trail – This planned City of Fife trail is shown in the Comprehensive Parks, Recreation, and Open Space Plan as located on North Levee Road, extending from Freeman Road northwest to the I-5 bridge over the Puyallup River with a connection to 20th Street. Trails on transportation rights-of-way are not usually subject to Section 4(f) protection, but as a planned facility some parts of the trail may extend beyond the public street system. Portions of the trail that are proposed along Wapato Creek could be subject to Section 4(f) protection. See Figure 3.

Puyallup Recreation Center – The recreation center consists of two adjacent facilities, a 25,000 square foot indoor recreation center, and a 16-acre park with 3 multi-use softball/baseball fields and an overlying soccer field. Also included are a children's playground and passive area, and a walking/jogging trail. See Figure 3.

[2] The Office of the Interagency Committee is a state agency that serves the *Interagency Committee for Outdoor Recreation (IAC)* and the *Salmon Recovery Funding Board (SRFB)*. The agency's staff, under the guidance of a director appointed by the Governor, implement policies and programs established by the two Boards, the Legislature, and the Governor.


SR 167 - Puyallup to SR 509
Figure 8
Recreational 4 (f) Resources
Puyallup River Bridge
Washington State
Department of Transportation
380
390
400
PROPOSED SR 167
LEVEE ROAD
PUYALLUP RIVER
N. MERIDIAN
PUYALLUP RIVERFRONT TRAIL
PUYALLUP RIVER BRIDGE
FILL

Other Park, Recreational Facilities, Wildlife Refuges, and Historic Properties Evaluated Relative to the Requirements of Section 4(f)

The purpose of this discussion is to address Section 4(f) requirements relative to other park, recreation facilities, wildlife refuges, and historic properties in the project vicinity. As indicated below, the build alternative does not result in a use of these other Section 4(f) resources. The discussion of each resource either documents (1) why the resource is not protected by the provisions of Section 4(f) or (2) if it is protected by Section 4(f), why the build alternative does not cause a Section 4(f) use by (a) permanently incorporating land into the project, (b) temporarily occupying land that is adverse to the preservationist purposes of Section 4(f), or (c) constructively using land from the resource.

As noted above there are no wildlife and waterfowl refuges impacted by this project. Some 70 historic properties within the area of potential effect (APE) were surveyed, with only those listed above being found eligible for the NRHP and therefore subject to Section 4(f) protection.

The following additional existing or planned recreation facilities are within the general vicinity of the project:

- Wapato Creek Trail
- Wapato Pointe PUD Trail
- Autumn Grove Trail
- Fife Landing Trail
- Fife Landing Trail Addition
- Fife Landing South Trail

Fife Landing South Trail – This trail extension, shown in the City of Fife's Comprehensive Plan 2002 Update, would follow Wapato Creek, crossing proposed SR 167 south of Valley Avenue and west of Freeman Road (see Figure 5). As a planned facility, no estimate of the number of users is available. The Puyallup Tribe currently owns the land within the planned trail. Currently, no public agency owns the proposed trail corridor needed for right-of-way. Therefore, the Planned Fife Landing South Trail is not a 4(f) facility.

The remaining five existing and proposed trails listed above are all outside of the impact area of the project. Therefore, the provisions of Section 4(f) are not triggered.

Description of Use

Historic Resources

Of the five resources eligible for protection under Section 4(f), the project will require use of three historic residences.

Table 2 – 4(f) Use - Historic Resources Eligible for the NRHP

Parcel Number[1]	OAHP[2] Number	Address	Section 4(f)Use	Description
P168	**27-4154**	**6803 20th St. E.**	**Yes – demolition**	**Residence**
P202	**27-4125**	**7001 20th St. E.**	**Yes – demolition**	**Residence**
P239	**27-4114**	**7717 Valley Ave. E.**	**Yes – demolition**	**Residence**
P490	27-4160	3423 Freeman Road	No	Residence
(Baggenstos Farm)	Fife-A-1	N. Levee Rd.	No	Farmstead

[1]Assigned by WSDOT
[2]Office of Archaeology and Historic Preservation

Site 27-4154 – Under the preferred build alternative, there would be a use of this historic residence. The property is directly within the proposed relocation of 20th Street East and construction of a roundabout. It is proposed that the structure be offered for sale to a buyer willing to relocate the structure. The structure would be demolished if no qualified buyer was identified in one year.

Site 27-4125 – Under the preferred build alternative, there would be a use of this historic residence. The property is within the proposed I-5 interchange structures. It would also be adversely affected by the proposed relocation of 70th Avenue with associated roundabout at the corner of 70th Avenue and 20th Street East. It is proposed that the structure be offered for sale to a buyer willing to relocate the structure. The structure would be demolished if no qualified buyer was identified in one year.

Site 27-4114 – Under the preferred build alternative, there would be a use of this historic residence. Proposed widening of Valley Avenue East will adversely affect the property. The residence would be demolished by the proposed realignment of Valley Avenue with Valley Avenue Realignment interchange option. The Freeman Road and Valley Avenue (preferred) interchange options would require use of the property as well. The building would be under the proposed structure for mainline SR 167 and on the inside of the NB SR 167 off-ramp, limiting access and increasing noise impacts to the residence.

Under the preferred Valley Avenue interchange option, the structure be offered for sale to a buyer willing to relocate the structure. The structure would be demolished if no qualified buyer was identified in one year.

Site 27-4160 – Under the preferred build alternative, no use, nor any constructive use, is expected of this historic residence. Although interchange options include widening of Freeman Road on the front (west) side of the site, the project can be designed to avoid any property acquisition.

Noise impacts were assessed in the Tier II DEIS and noise modeling near the site indicates noise levels will remain under 63-dBA under future buildout conditions with the proposed project. A noise wall for this area was determined to be not feasible and not

reasonable because it is not possible to achieve a 7-dBA reduction. Visual impacts will be avoided, as the property front on Freeman Road currently has an extensive hedge system. In addition, the project proposes to install riparian plantings in the property directly across from the site on Freeman Road. These plantings of a riparian forest combined with an interchange off-ramp that is not elevated, will reduce the visual impacts from the project.

Site Fife-A-1 (Baggenstos Farm) – Under the preferred build alternative, there would not be a use of this historic farm. WSDOT will design the compensatory wetland mitigation site to avoid any identified 4(f) resource.

Recreational Resources

Of the seven recreational resources eligible for 4(f) protection, the project will require use of a planned facility and a multi-use trail.

Table 3 – Section 4(f) Use - Recreational Resources Eligible for 4(f) Protection

Recreational Resource	Location	Section 4(f)Use	Description
Planned Lower Hylebos Nature Park (Trail)	Adjacent to Milgard Restoration Site	No	Multi-use trail
Planned Pacific National Soccer Park	**I-5 Interchange**	**Yes – land acquisition**	**Soccer facility**
Interurban Trail	**I-5 Interchange**	**Yes – land acquisition**	**Multi-use trail**
Riverfront Trail	Puyallup River Bridge	No	Multi-use trail
Planned North Levee Trail	N. Levee Rd.	No	Multi-use trail
Puyallup Recreation Center	WSP Weigh Stations	No	Community recreation center

Planned Lower Hylebos Nature Park (Trail) – Under the preferred build alternative, access to this proposed trail will be limited by the removal of 8th Street East and 62nd Avenue East. There is no required use of this proposed trail. FHWA and WSDOT met with the City of Fife on May 8, 2003 and June 2, 2004 to discuss access issues for this proposed restoration project. The City of Fife has stated that a change in the location of proposed parking (at 8th Street East) would require an amendment to the city's Shoreline Permit although an alternative access point to this site, 4th Street East, exists. In addition, NOAA and it's partners (the U.S. Army Corps of Engineers) do not currently support changing the location of access to the site. Access to this proposed trail exists through 4th Street East, therefore will be no constructive use of this 4(f) facility. FHWA and WSDOT will continue to work closely with the City to address parking and access needs as project design is finalized.

Planned Pacific National Soccer Complex - Based on the project footprint of the proposed I-5 Interchange, relocation of 20th Street East, and the relocations of Hylebos Creek and Surprise Lake Drain with associated buffers as shown in the February 2003 Tier II DEIS and a preliminary design drawing from the City of Fife depicting a potential 18 soccer fields at the complex site, the project would require use of 12 of the 18 proposed soccer fields, see Figure 4. Through minimization measures and coordination with the City of Fife, use of these soccer fields have been limited to 6 of the currently designed 18 soccer fields, see Figure 13.

Interurban Trail – The relocation of Hylebos Creek, mitigation for stream fill, would require use of approximately 2-3 acres at the southerly terminus of the trail. See Figures 4 and 7.

Riverfront Trail – This existing trail beneath the two SR 167 Puyallup River bridges will require access to the path be limited during construction, for safety reasons. The ownership of the trail would not change; there will be no adverse change to the function of the trail; and no land would be acquired from the trail. FHWA, WSDOT, and the City of Puyallup are committed to work cooperatively in identifying an acceptable interim route for the trail during the course of construction. See Appendix B.

Noise impacts in the vicinity of the Riverfront Trail were assessed in response to comments received on the SR 167 Tier II Draft EIS. Existing noise levels range from 65 to 71 dBA. Noise modeling indicated that future conditions without the project will cause noise levels to increase from 2 to 9 dBA. Future build out with the project will cause noise levels to increase an additional 1 dBA. Although the projects contributions to noise impacts are minimal, a noise wall along the south shoulder of SR 167 between Milwaukee Avenue East and SR 167/161 was found to be both feasible and reasonable. Noise mitigation will be provided at this location. Visual impacts are not anticipated at this site, as there will be no substantive change to the trail area from the project. Therefore, there is no constructive use of the site.

Planned North Levee Trail – This planned trail is proposed to run adjacent to one of the proposed wetland mitigation sites in the *SR 167 Conceptual Mitigation Plan,* WSDOT February 2005. Part of the wetland mitigation proposal at this site includes breaching of the Puyallup River dike and N. Levee Rd. to provide hydraulic connectivity for the wetlands being established. WSDOT has not identified a preferred mitigation site(s), therefore there is no use of this planned trail by the project at this time. Should that change in the future, a separate 4(f) evaluation will be circulated.

Puyallup Recreation Center - There would be no right of way acquisition from the center, so no Section 4(f) land would be permanently used by being incorporated into a transportation facility. There would be no access impacts, as access for the center is from the local street system on the opposite side from the highway. The Tier II DEIS and the studies performed in support of it did not indicate any impacts that would affect the function or use of this facility. The aesthetics in the vicinity of the recreation center may be somewhat impacted. The roadway will become a dominant element within the rural

setting adjacent to the baseball fields. The lights from cars at night will detract from current views. Mitigation proposed includes use of architectural or vegetative screening to block the view of traffic and vegetating the embankment side slopes.

The noise study prepared in support of the Tier II DEIS (Parsons Brinkerhoff, 2001) indicated noise at the recreation center would increase from 52-dBA to 70-dBA, which is a substantial increase from the existing and no build conditions. The FHWA noise abatement criterion for active recreation areas is 67-dBA. Construction of a noise wall at that location was found to be feasible because a 10-foot high wall 2,400 feet long would provide a 7-dBA reduction in noise for the Recreation Center. However, it was determined to be not reasonable under established WSDOT criteria. Using the "Noise Evaluation Procedures for Existing State Highways" (WSDOT Directive D 22-22), a residential equivalency of 15 home was calculated for the center based on the number of users. In order to achieve the 7-dBA reduction in noise, the recreation center would need a residential equivalency of 25 homes.

Avoidance Alternative

No Build Alternative
The No Build Alternative, while it will avoid impacts to all 4(f) resources, does not satisfy the purpose and need of the project, which is to improve regional mobility, serve freight and passenger movement, reduce congestion and improve safety, improve system continuity between I-5 and the SR 167 freeway, and maintain or improve air quality.

Tier I
The design of a new freeway that would connect existing SR 167 (where it connects with North Meridian Street in Puyallup) to I-5 and, ultimately, SR 509 is limited to an area between the Puyallup River to the south and Fife Heights (steep slopes) to the north. This narrow section of the Puyallup River Valley is completely within the external boundary of the Puyallup Tribal Reservation and contains a number of tribal trust properties. The Puyallup Tribe has voiced strong opposition to any corridor alternative that requires the use of tribal trust lands. Designs for this new freeway must also factor in existing environmental resources such as Wapato Creek, Oxbow Lake, Surprise Lake Drain, and Hylebos Creek; wetlands (over 107 acres of wetlands delineated by the project in this area); and associated floodplains. Furthermore, design options for an interconnection with I-5 are limited to the two existing interchanges (Port of Tacoma and 54th Avenue) and one potentially new interchange around 70th Avenue East.

With these limitations in mind, all corridor alternatives that would provide the necessary connections within this short segment were evaluated. Tying the proposed SR 167 Extension freeway into the existing I-5 / 54th Avenue Interchange was never considered a viable option. That interchange and adjoining surface streets are built-out and operating at maximum capacity. The I-5 / 54th Avenue Interchange, and the signalized 54th Avenue intersections with 20th Street and Pacific Highway were all operating at a Level of Service (LOS) "F" back in 1990. Impacts to this industrial/commercial area would require extensive and significant displacement and relocation costs. Several 4(f)

recreational resources such as Yamamoto Park, Fife Community Pool, Centennial Park, Wapato Nature Area, Wedge Park, and Dacca Park would be difficult to avoid. Up to 40 known historic 4(f) resources exist within this corridor path.

Rebuilding the entire system, adding additional traffic to this system, and designing a corridor that avoids all 4(f) resources while still meeting the purpose and need of the project is potentially not feasible and is not prudent. Therefore, all corridor alternatives that would connect with the existing I-5 at 54th Avenue were rejected.

This left a total of nine corridor alternatives which were further analyzed. The remaining alternatives were subjected to an initial screening analysis based on several criteria detailed below and were presented for public review.

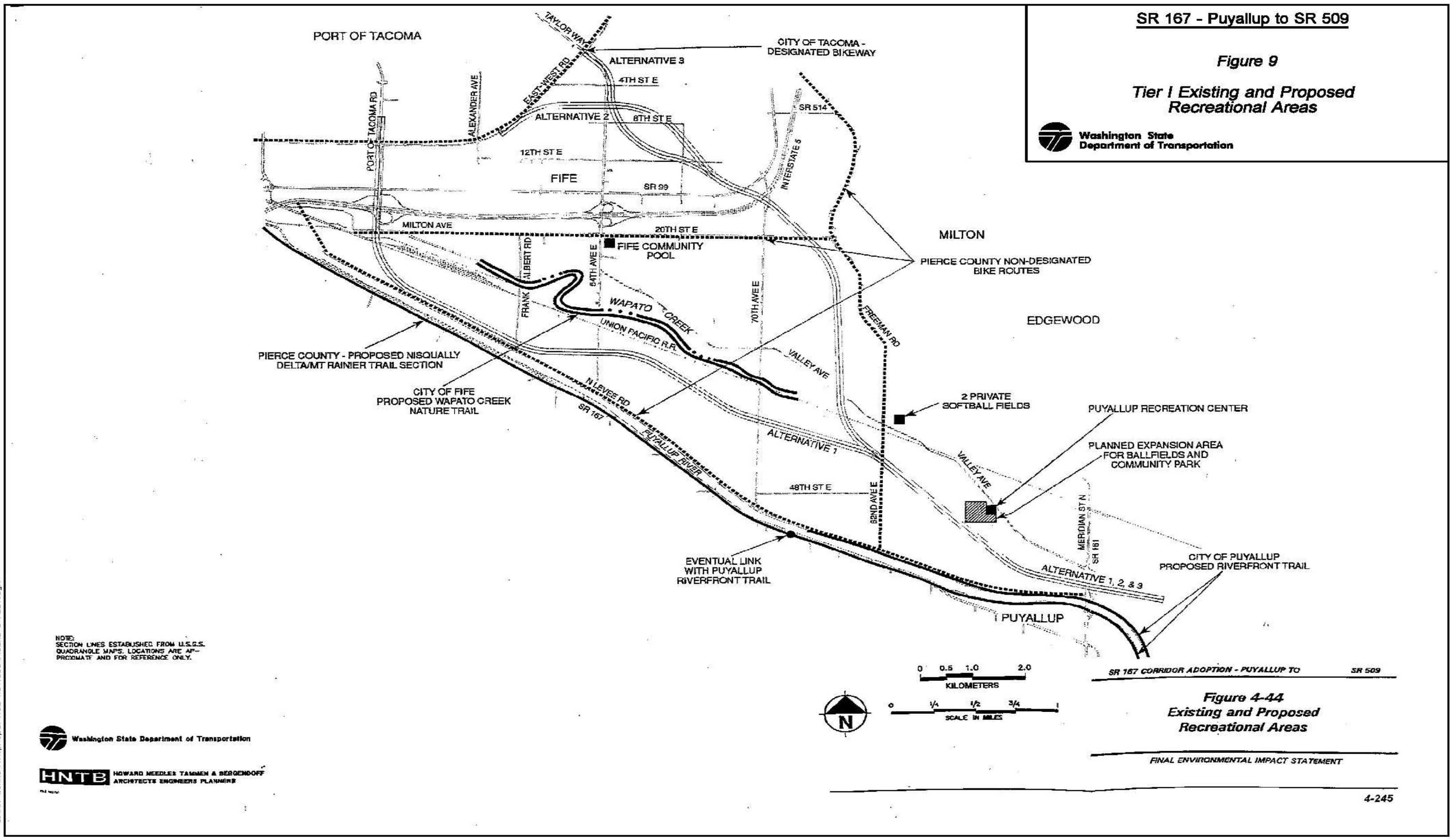
Use of 4(f) Protected Resources
Eastern Washington University Archeological and Historical Services (AHS) performed the cultural resources overview for the SR 167 Tier I EIS. Background research included consultation with personnel at the Washington State Office of Archaeology and Historic preservation (OAHP) in Olympia prior to 1993. Findings included three properties recorded by Pierce County and an ethnographically documented Puyallup winter village. As confirmed in the Cultural Resource Investigations for the Washington State Department of Transportation's SR 167: Puyallup to SR 509 Project, Pierce County, Washington, AHS May 2004, and the June 15, 2004 SHPO concurrence, the three recorded properties, George Hoertrich Electrical Shop, the Golden Rule Motel, and the Firwood School Gymnasium, do not meet the National Register Criteria.

However, a number of recreational 4(f) resources were identified, including the Fife Community Pool, the proposed Nisqually Delta/Mount Rainier Trail, the proposed Wapato Creek Nature Trail, the Puyallup Recreation Center, and various bike trails.

Tribal Trust Lands
Corridor alternatives that would require use of Tribal Trust Lands were determined to be not feasible or prudent. Acquisition of Tribal Trust Lands would be entirely dependent on whether the Puyallup Tribe is a willing seller of their entrusted property and the tribe clearly indicated its opposition to such a sale.

Avoidance of Wetlands, Streams, and Floodplains
Corridor alternatives that would have significantly greater impacts to wetlands, streams, or floodplains were determined to be not feasible or prudent. Any impacts to these resources require a permit from the U.S. Army Corps of Engineers, per Section 404. The permitting agency clearly indicated that only alternatives that avoided or minimized impacts to these resources would meet permit requirements.

Of the nine corridor alternatives, six alternatives would impact tribal trust lands while at the same time having significantly greater impacts to aquatic resources such as wetlands, streams, and floodplains. In addition, all of these alternatives would impact 4(f)


SR 167 - Puyallup to SR 509
Figure 9
Tier I Existing and Proposed Recreational Areas
Washington State Department of Transportation
PORT OF TACOMA
TAYLOR WAY
ALTERNATIVE 3
CITY OF TACOMA - DESIGNATED BIKEWAY
4TH ST E
ALTERNATIVE 2
8TH ST E
12TH ST E
FIFE
SR 99
SR 514
INTERSTATE 5
MILTON AVE
20TH ST E
FIFE COMMUNITY POOL
MILTON
PIERCE COUNTY NON-DESIGNATED BIKE ROUTES
EDGEWOOD
WAPATO CREEK
UNION PACIFIC R.R.
VALLEY AVE
PIERCE COUNTY - PROPOSED NISQUALLY DELTA/MT RAINIER TRAIL SECTION
CITY OF FIFE PROPOSED WAPATO CREEK NATURE TRAIL
N LEVEE RD
SR 167
PUYALLUP RIVER
2 PRIVATE SOFTBALL FIELDS
PUYALLUP RECREATION CENTER
PLANNED EXPANSION AREA FOR BALLFIELDS AND COMMUNITY PARK
ALTERNATIVE 1
48TH ST E
EVENTUAL LINK WITH PUYALLUP RIVERFRONT TRAIL
CITY OF PUYALLUP PROPOSED RIVERFRONT TRAIL
ALTERNATIVE 1, 2, & 3
PUYALLUP
NOTE: SECTION LINES ESTABLISHED FROM U.S.G.S. QUADRANGLE MAPS. LOCATIONS ARE APPROXIMATE AND FOR REFERENCE ONLY.
Washington State Department of Transportation
HNTB HOWARD NEEDLES TAMMEN & BERGENDOFF ARCHITECTS ENGINEERS PLANNERS
KILOMETERS
SCALE IN MILES
SR 167 CORRIDOR ADOPTION - PUYALLUP TO SR 509
Figure 4-44
Existing and Proposed Recreational Areas
FINAL ENVIRONMENTAL IMPACT STATEMENT
4-245

resources. Due to these increased environmental impacts, the opposition of the Puyallup Tribe to use of tribal trust properties, and the impact to additional 4(f) resources, these corridor alternatives are not feasible and prudent avoidance alternatives.

Only three corridor alternatives avoided all of the then identified 4(f) resources, including the then proposed Riverfront Trail, proposed Wapato Creek Nature Trail, North Levee Bike Route, and the Puyallup Recreation Center, as shown in Figure 9.

Pursuant to 23 CFR §771.135(o)(2), the three remaining corridor alternatives in Tier I were reviewed based on additional design details and identified 4(f) resources. Figure 10 shows the overlay of the three Tier I corridor alternatives and current identified 4(f) resources.

Tier 1 Corridor Alternative 1

Based on the current analysis of 4(f) facilities, the following historic and recreational 4(f) resources would require a use by Corridor Alternative 1:

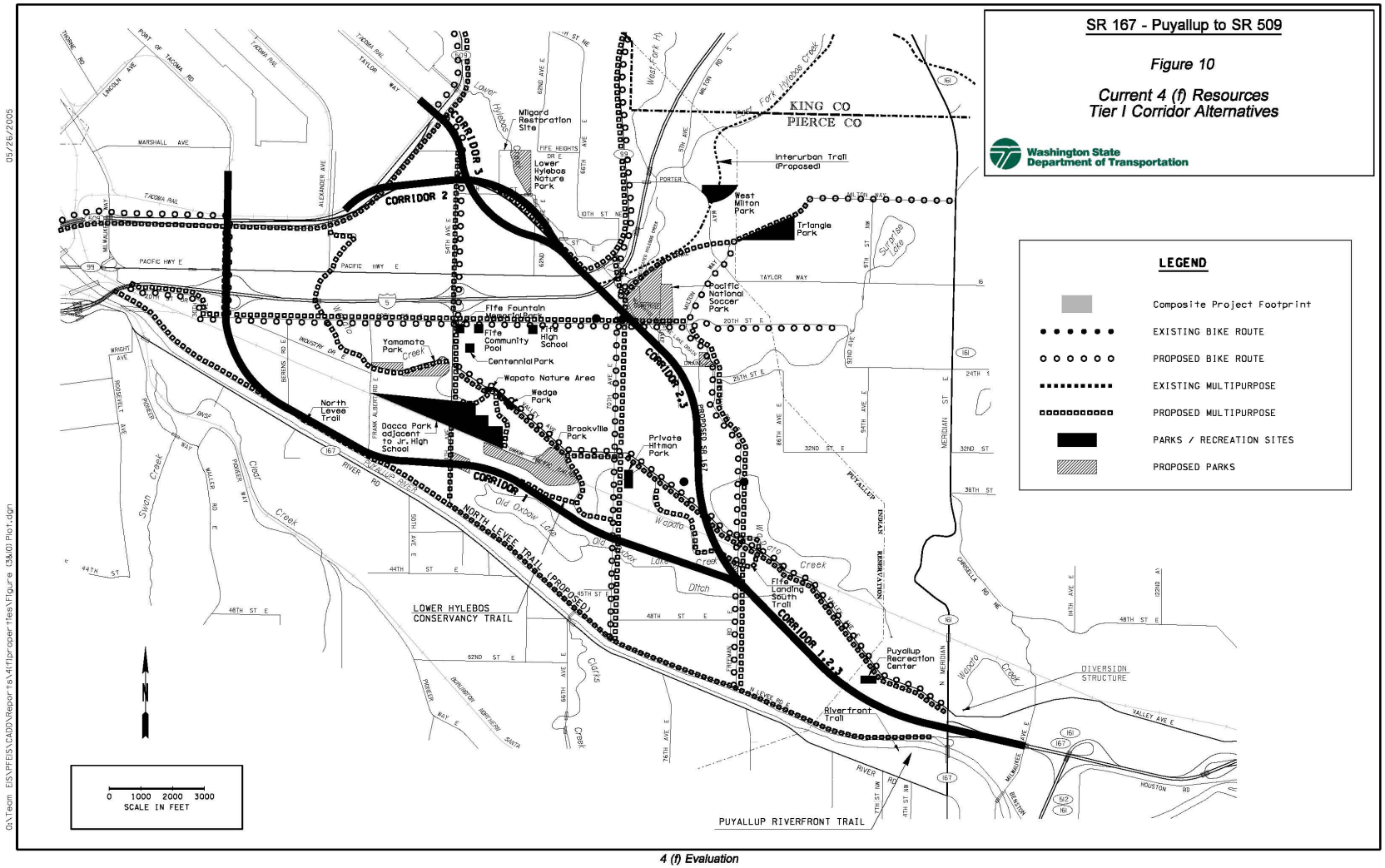
- Historic 4(f) resource: the Baggenstos Farm (Fife A-1)
- Recreational 4(f) resources:
    - A planned park adjacent to 54th Avenue;
    - The planned North Levee Trail; and
    - The existing Autumn Grove trail.

All potential historic 4(f) resources may not have been identified for this corridor, as the cultural resource survey performed for the Tier II document was limited to the preferred Tier 1 corridor alternative (2).

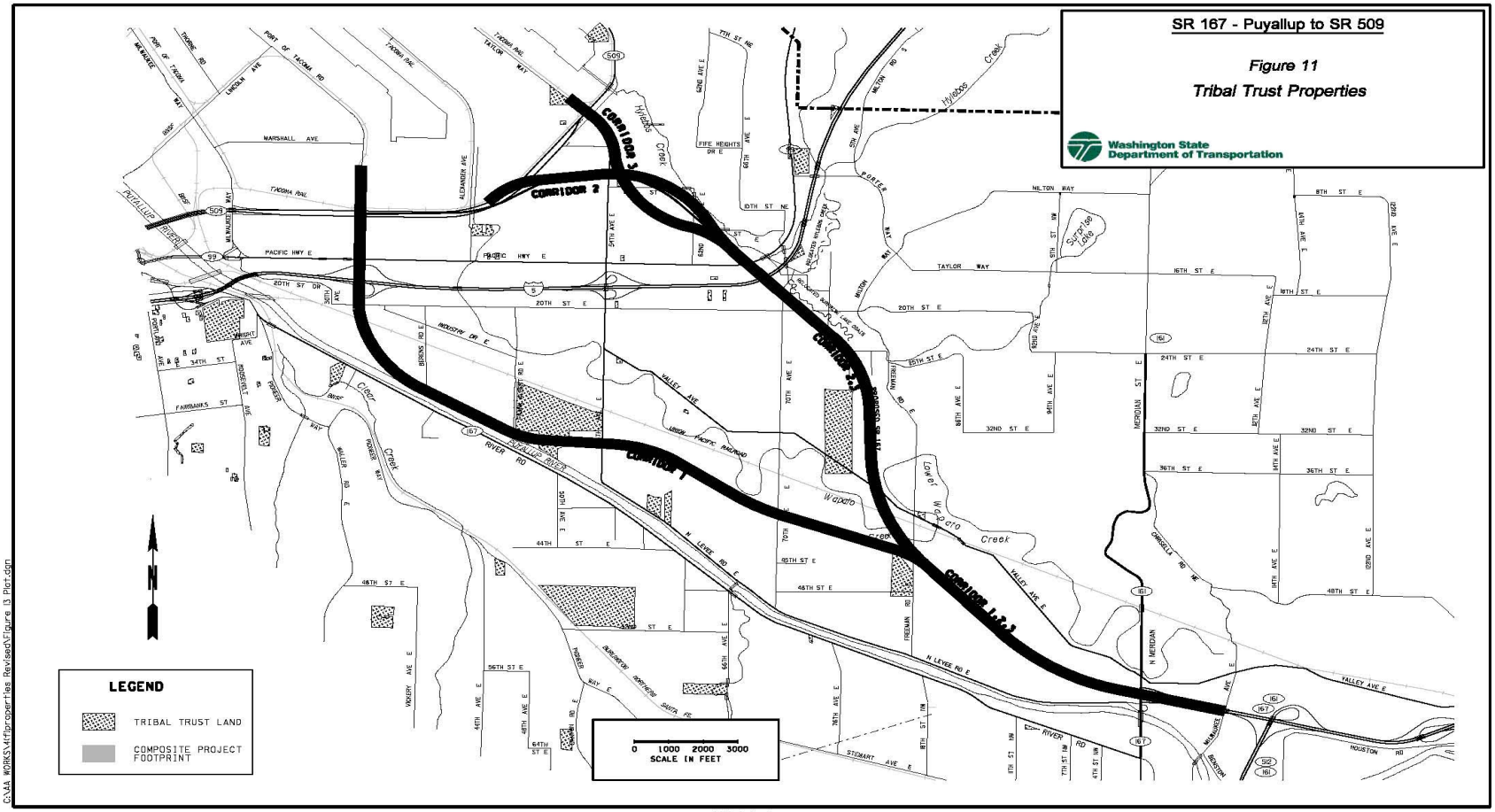
Corridor Alternative 1 is not a prudent alternative due to the following factors:

1. Impacts to Puyallup Tribal Trust Lands: Corridor Alternative 1 would bisect one of the few remaining large tribal trust properties for the Puyallup Tribe, and was not supported by the Tribe, see Figure 11. A number of project related issues remained unresolved with the Puyallup Tribe, including visual, noise, and traffic impacts to Tribal Trust Lands, but the Tribe clearly indicated would only support a corridor alternative which avoided all Tribal Trust Lands. Commitments to the Puyallup Tribe are in Appendix K of the SR 167 Tier I EIS and the Tier I Record of Decision (ROD).

2. Wetlands: Wetland impacts were reanalyzed as part of the *404(b)(1) Alternatives Analysis*, WSDOT July 2004. A 220' corridor width had been applied in estimating wetland impacts for the Tier I document. Refinement of the corridor in Tier II revised the footprint of the project such that impacts were evaluated within an approximately 400' area, to accommodate interchange options and park and ride facilities. Application of a 400' wide zone to the analysis of wetland impacts significantly increases the amount of impacts associated with Corridor Alternative



4 (f) Evaluation


SR 167 - Puyallup to SR 509
Figure 11
Tribal Trust Properties
Washington State Department of Transportation
LEGEND
TRIBAL TRUST LAND
COMPOSITE PROJECT FOOTPRINT
0 1000 2000 3000
SCALE IN FEET
CORRIDOR 1
CORRIDOR 2
CORRIDOR 3
CORRIDOR 1&3
PUYALLUP RIVER
Clear Creek
Hylebos Creek
Wapato Creek
Surprise Lake
4 (f) Evaluation

1. Also, although Tier I wetland impacts were based on wetland inventories[2], one partially delineated wetland[3] would be impacted by Corridor Alternative 1 which also increased impacts. Table 4 shows the revised wetland impact analysis.

Table 4: Revised Estimated Tier I Corridor Wetland Impacts

Corridor Alternative [a]	Segments	Tier I FEIS Wetland Impacts	Revised Estimated Wetland Impacts
Corridor 1	A & E	14.55	>37.89 [c]
Corridor 2	A, B, & C	7.44	32.9 [b]
Corridor 3	A, B, & D	15.98	>44.08 [c]

a) Corridor Alternative from the Tier I EIS.
b) Corridor 2 impacts are not an estimate, but actual project impacts from the Tier II EIS.
c) Currently definable estimates. These impacts would most likely increase proportionally with field delineation along the entire corridor.

Corridor Alternative 1 would also limit mitigation opportunities in the Puyallup River basin, as the corridor would impact the Union Pacific Railroad Site, which has a high potential for mitigating all of the projects impacts for wetland fill activities.

3. Floodplain impacts: The levy system on the Puyallup River is currently failing due to excessive buildup of sediment and the determination by the US Army Corps of Engineers, that dredging the sediment is no longer a supportable practice. A study is underway to determine the new boundaries of the floodplain in the Puyallup River Basin. Corridor Alternative 1, with its proximity to the Puyallup River, would be within the extended 100-year floodplain. Designing the roadway within this extended floodplain would be very difficult and potentially costly, as determining what the impacts of the failing levy system would have to facilities in the proximity of the Puyallup River are not currently available.

4. Floodplain benefits: Corridor Alternative 2 includes the relocation of Hylebos Creek. This relocation will address current and future projected increased flooding of I-5 in the vicinity of the City of Fife (Fife Curve). Corridor Alternative 1 would not require the relocation of Hylebos Creek.

Tier 1 Corridor Alternatives 2 and 3

Corridor Alternative 2 and 3 differ only between SR 509 and the I-5 Interchange. Therefore, all 4(f) resources affected by the preferred alternative would also be used by

[2]U.S. Fish and Wildlife National Wetland Inventory maps, along with the Pierce County, City of Fife, and City of Puyallup wetland inventory maps were used to identity wetlands in the project area in Tier I.
[3] Wetlands were delineated in accordance with the U.S. Army Corps of Engineers *Wetland Delineation Manual* (Environmental Laboratory, 1987). Not all wetlands were completely delineated (i.e. all boundaries and buffer areas identified), just wetlands within the project footprint.

Corridor Alternative 3. Corridor Alternative 3, as shown in Table 4, would have the most significant wetland impact of the corridor alternatives. With 44 acres of wetland impacts, the project would fail to receive the necessary permits to construct the project. Specifically, Corridor Alternative 3 would fail to meet the requirements for Section 404, specifying a design that is the Least Environmentally Damaging and Practicable Alternative (LEDPA).

There are no corridor alternatives meeting the purpose and need of this project that would avoid 4(f) resources based on the current analysis of 4(f) resources. Corridor 1 would use 3 recreational resources and Corridors 2 and 3 would use 2 recreational resources. Although one, as opposed to three, historic resources have been identified for Corridor 1, additional historic resources are document in the vicinity of Corridor 1. In addition, Corridor Alternatives 1 and 3 are not feasible and prudent avoidance alternatives due to their impacts to wetlands and the determination by the U.S. Army Corps of Engineers that these alternatives are not LEDPA.

Tier II

In the Tier II analysis, the preferred Corridor Alternative 2 design was refined and interchange options were developed as described in the previous section, Alternatives and Options. Avoidance alternatives associated with the interchanges are discussed below.

I-5 Interchange

After the ROD for the Tier 1 EIS was approved by FHWA, the mainline alignment of SR 167 had to be redesigned because geometric design standards were not met. For the mainline redesign, five different centerline-only options were developed for SR 167 between SR 509 to just south of the I-5 Interchange. All these options met the current design standards and changed the I-5 crossing from a horizontal curve to a tangent section.

Avoidance of the Planned Pacific National Soccer Facility

State and Federal guidelines require a minimum distance of 1 mile between interchanges. Because of the location of Hylebos Creek and the geography of the area in this vicinity, it is not possible to place this interchange any further north than 0.8 miles from the 54th Street East I-5 Interchange. In addition, any redesign of the SR 167 mainline to the north would continue to require use of the Interurban Trail. Based on these factors, it is neither feasible nor prudent to relocate the mainline to the north in an attempt to avoid the planned Pacific National Soccer Facility.

Avoidance of Historic Resources

The proposed I-5 interchange location is also limited by the two historic 4(f) resources on 20th Street East on the south/west side of the alignment. Avoidance of these two historic resources would require the relocating the interchange at least 300', which would not meet standards for placement of interchanges to the south. In addition, relocating the proposed I-5 Interchange closer to existing 54th Street Interchange would impact a commercial area of the City of Fife. As shown in the picture below, the majority of the

impacts would be associated with an apartment complex with 241 units, with one through three bedrooms. This complex has a requirement to fill 20% of the complex with low income families. The apartment complex reported 90% occupancy in 2001. Displacing these families would increase displacement impacts associated with the I-5 Interchange by 217 to 241 Multi-Family Units, an impact of extraordinary magnitude. Therefore, redesigning the mainline to avoid these 4(f) resources is neither feasible nor prudent.

SR 167 Bridge Over Existing 20th Street East

SR 167 will have a direct impact on 20th Street East. Maintaining 20th Street East in its current alignment would avoid the historic (4f) resource, Site No. 27-4154. Extending the structure for the I-5 Interchange to provide continued access for this local road was evaluated.

In order to accommodate required bridge clearance for this existing roadway, the I-5 Interchange would be required to be elevated to four levels. This option was evaluated in the *Value Engineering Study Report, SR 167 and I-5 Interchange*, October 2000.

Residents in the Fife Heights area expressed concern based on visual impacts from the elevated structures. At three levels, the I-5 interchange will be approximately 80 feet high, adding a 4th level to the I-5 I/C will add approximately 26-30 feet of height. Visual and audible impacts for these residents would occur if a 4 level interchange was developed, see Figure 12.

Cost estimates for additional structures necessary for a 4 level interchange would be $87.5 million more than a 3 level interchange, due to poor soil stability. Although it is feasible that a 4 level structure could be designed for the proposed I-5 interchange, it is

not prudent due to an additional construction cost of extraordinary magnitude. Therefore, it was determined that both 70th Avenue and 20th Street East should be realigned in order to keep the total interchange at three levels.

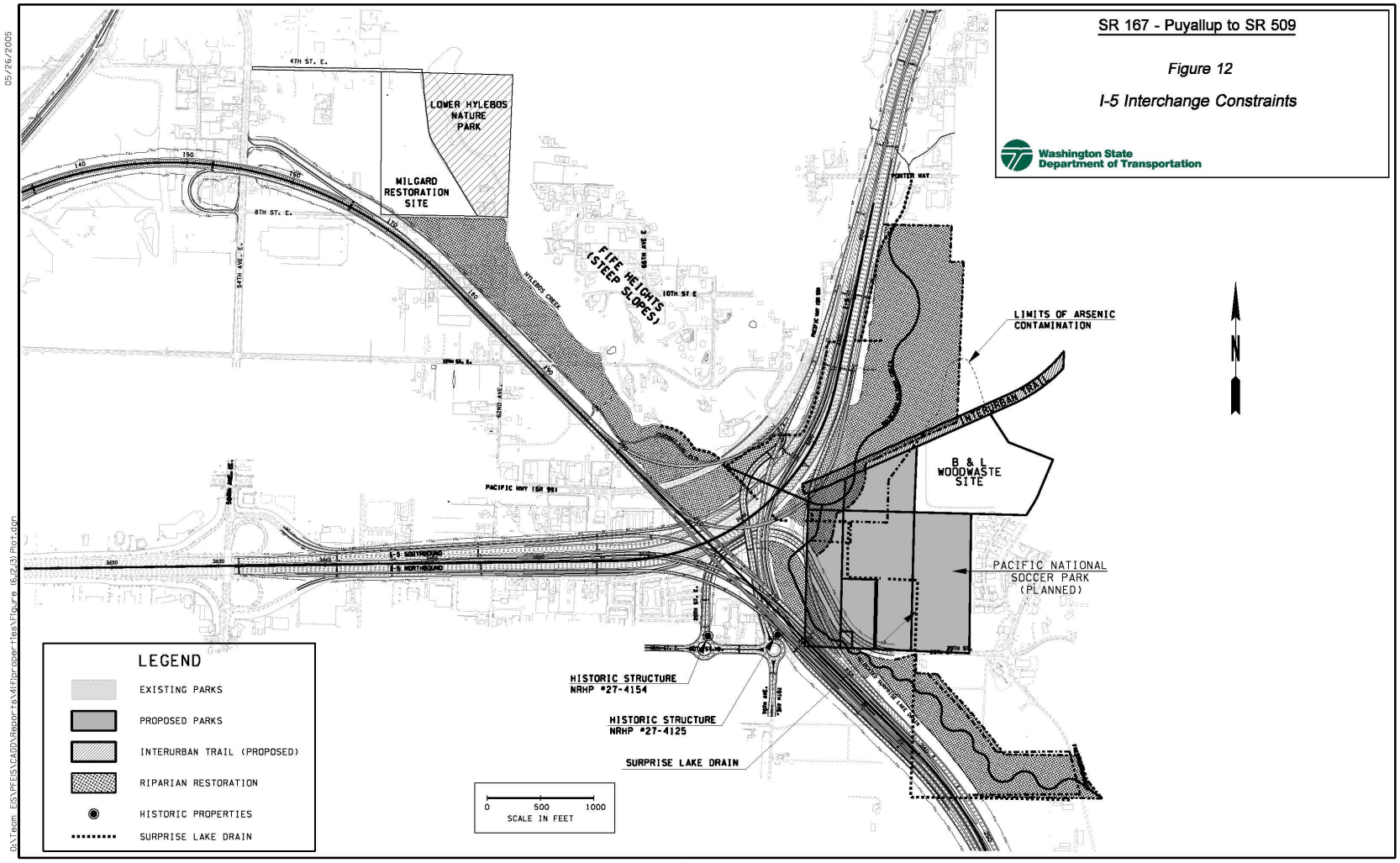
Placement of the relocation of 20th Street East is limited by design factors, such as the distance between the two-lane roundabouts associated with the 20th Street East and 70th Avenue relocations. If the relocation was shifted to the west, a large apartment complex described above would be impacted requiring extensive relocations as well as high real estate costs. The apartment complex also contains 48 Section 8, low-income units. Impacts to the apartment complex would include environment justice impacts, due to those low-income facilities. In addition, none of the potential designs for 20th Street East would avoid all 4(f) resources. Therefore, it is not prudent to bridge existing 20th Street East or relocate 20th Street East to the west.

Relocation of Hylebos Creek

The southern terminus of the Interurban Trail and the planned Pacific National Soccer Park are impacted by the proposal to relocate Hylebos Creek. Existing Hylebos Creek, between the existing 70th Avenue bridge and the first existing crossing I-5 crossing, would be filled as part of the NB I-5 widening. Leaving the creek in the existing location but inside a closed pipe, would not be acceptable to permitting agencies. Impacts to the creek affect 2,050 linear feet of stream bed. Closed pipes of any significant length are an effective block to aquatic species, such as salmonids. Therefore, a closed pipe could not be installed in the existing location.

Relocating the creek further to the west side of proposed I-5 widening would not provide enough riparian buffer to meet City of Fife Critical Area Ordinances. The channel would need to be linear and potentially armored, which would impact the creek instead of improve it. Furthermore, this area is needed to provide water quality treatment for mainline I-5 and the SB I-5 to SR 167 off ramp. This is because I-5 in the vicinity of the proposed interchange drains all highway runoff to the west with no other options to channel the stormwater elsewhere.

Crossing I-5 at the preferred location provides the fewest impacts to Hylebos Creek and optimizes flood conveyance. The proposed design will reduce existing and future flooding problems in the vicinity, according to a study prepared for WSDOT by MGS Engineering, November 2004. Portions of I-5 in this vicinity were flooded during the 1990 and 1996 floods. WSDOT is evaluating the I-5 profile in an effort to keep the new I-5 crossing of Hylebos Creek above the floodwater. WSDOT is limited on how high the I-5 profile could be elevated because of the height limitations on the interchange structures due to foundation considerations, and the additional structural costs resulting from extending bridge lengths in response to raising the I-5 profile. Therefore, the relocated stream channel will be designed to successfully address both existing and future flooding of I-5.



4 (f) Evaluation

WSDOT considered locating the new Hylebos Creek crossing in the vicinity of the existing 70th Avenue Bridge. This would reduce the channel length required for the relocation, avoid impacts to a sewer main, and avoid impacts to the Interurban Trail.

However, this option would not function as efficiently for flood conveyance as the preferred option, potentially resulting in flooding of the new I-5 freeway bridge over Hylebos Creek, and would not resolve the existing problems of flooding over I-5 lanes.

Also, if the Hylebos crossing was moved futher north, it would impact the crossing of Surprise Lake Drain. If the Surprise Lake Drain crossing is moved further north, then this stream will impact the Interurban Trail. If a connection to relocated Hylebos Creek is not provided, then two bridges at I-5 would be required instead of one, which will add cost to the project.

Relocating Hylebos Creek further north would also have greater ecological impacts to Hylebos Creek because of the construction of relocated 70th Avenue and the SB I-5 to NB 167 Off-Ramp. For the reach between the existing SR 99 and 70th Avenue bridges, the remaining riparian buffer for Hylebos Creek would be reduced to essentially zero on the north and about 100 feet to the south. These buffers are deficient by any scientific standard, including the City of Fife's Critical Areas Ordinance, and the Integrated Streambank Protection Guidelines, which is WSDOT's standard for best available science. This option would also eliminate the wildlife linkage with the Surprise Lake Tributary, and require separate I-5 crossings for this tributary stream. WSDOT would not likely acquire permits for this work.

Surprise Lake Drain Relocation

The Planned Pacific National Soccer Facility is located within the ditched system of Surprise Lake Drain. The City of Fife will need to address impacts to this waterbody as part of the construction of the soccer facility. The project has proposed to relocate Surprise Lake Drain as part of the mitigation for fill of Surprise Lake Drain by the mainline section of SR 167. In the DEIS, the relocation of Surprise Lake Drain would be located to the east of relocated 20th Street. The relocation as originally proposed, and the riparian buffer (at least 150 feet wide), would impact the planned soccer facility, requiring use of 12 of 18 proposed soccer fields (approximately 40 of 54 acres), Figure 4.

Through coordination with the City of Fife, WSDOT redesigned both the relocation of 20th Street and the relocation of Surprise Lake Drain. This redesign, though limited by roadway curvature standards for 20th Street and regulatory buffers for Surprise Lake Drain, minimizes use of the soccer facility such that the City of Fife will be able to design 12 soccer fields in the remaining area, see Figure 13.

Valley Avenue Interchange

The SR 167 corridor alignment in the vicinity of Valley Avenue is limited by a historic and recreational 4(f) resource to one side, and a historic 4(f) resource on the other side.

One historic resource, a residence, is beneath the structure of the mainline alignment as it bridges Valley Avenue. This residence would be located between the structure of mainline SR 167 and the proposed off-ramp from northbound SR 167 to Valley Avenue. The alignment near this site is extremely confined by factors such as:

- Design requirements: a shift of the corridor to avoid 4(f) resources would require the mainline corridor alignment to shift at least 300' either east or west of the proposed alignment;
- Geographical limitations to the east of Freeman Road: The corridor alignment cannot be shifted to the east due to cliffs adjacent to Freeman Road;
- Tribal trust lands: Shifting the alignment west would significantly impact six tribal trust properties. One tribal trust property also exists to the east of the alignment (see Figure 11);
- Crossings of Wapato Creek: The current alignment limits crossings of Wapato Creek to 1 mainline crossing. Shifting the alignment either east or west would increase mainline crossings by at least one.

Measures to Minimize Harm

Historic Resources

As outlined in the Memorandum of Agreement (see Appendix A), the residences will be offered for sale, based on the buyer's ability to move the residence to a different location.

If the house does not sell within a year, photo-documentation will occur and the residences will be demolished.

Recreational Resources

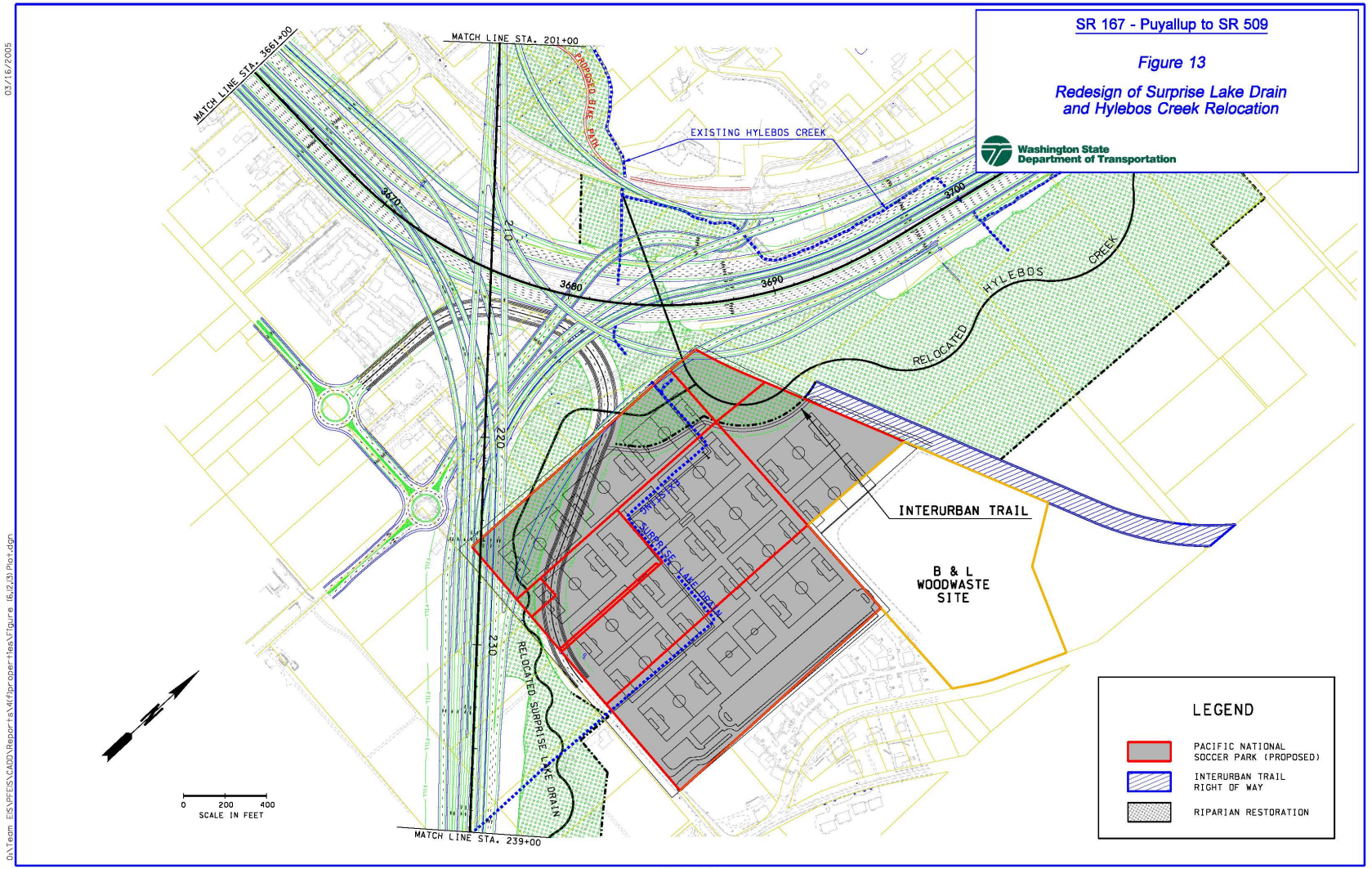
Lower Hylebos Nature Park
Access to the site, including parking, will be coordinated with the City of Fife. Discussions to date have covered improvements to 4th Street East and the possibility of constructing a pedestrian bridge across Hylebos Creek.

Planned Pacific National Soccer Park
The City of Fife was aware of the highway design at the time they proposed and acquired the soccer complex property, and presentations made to the public of the complex design in June 2003 showed the proposed highway project relative to the proposed layout of soccer fields and associated site improvements. Through meetings with the city, WSDOT prepared an alternative design of the I-5 interchange, which reduced impacts to the planned soccer complex such that 12 fields are possible at this site, Figure 13. This meets the minimum requirements for the City of Fife for funding of this facility.

The SR 167 Project has incorporated elements into the design of the project that will benefit the planned Pacific National Soccer Park. The *Analysis of the SR 167 Extension and Riparian Restoration Proposal in the Hylebos Watershed*, November 2004, included stormwater runoff from the soccer complex. The project proposal to relocate Surprise Lake Drain from its current ditched location and create a riparian zone around the relocation area will directly benefit the planned soccer facility. The benefits of this relocation would also include reducing flood impacts to the planned Pacific National Soccer Park.

Because funding for construction of SR 167 is not secured at this time, and the City is currently developing the master plan for the soccer complex, WSDOT is committed to continue working with the City of Fife as the plans for both the relocation of Surprise Lake Drain and Hylebos Creek with associated regulatory buffers are refined. Final measures to minimize harm to the soccer complex will be determined once construction funding for SR 167 has been secured. Mitigation, if necessary, will be provided for any required use of the developed soccer facility.

Interurban Trail
Access to relocated 20th Street East which will provide access to relocated 70th Avenue through local streets, will be provided as part of the relocation of the southern terminus of Interurban Trail, Figure 13. Any additional facilities, such as parking that are developed for the trailhead of the Interurban Trail by the City of Milton, if use is required, will also be addressed. A conversion package will be put together detailing that all practical alternatives to the conversion have been evaluated and rejected; the fair market value of the land to be converted and the replacement land; that the replacement land is of reasonably equivalent recreation or habitat utility and location; and that the replacement land meets eligibility requirements, prior to construction of SR 167.


SR 167 - Puyallup to SR 509
Figure 13
Redesign of Surprise Lake Drain and Hylebos Creek Relocation
Washington State Department of Transportation
MATCH LINE STA. 201+00
MATCH LINE STA. 366+00
MATCH LINE STA. 239+00
PROPOSED BIKE PATH
EXISTING HYLEBOS CREEK
RELOCATED HYLEBOS CREEK
INTERURBAN TRAIL
B & L WOODWASTE SITE
RELOCATED SURPRISE LAKE DRAIN
SURPRISE LAKE DRAIN
SURPRISE LAKE DRAIN
3670
3680
3690
3700
210
220
230
0 200 400
SCALE IN FEET
LEGEND
PACIFIC NATIONAL SOCCER PARK (PROPOSED)
INTERURBAN TRAIL RIGHT OF WAY
RIPARIAN RESTORATION
03/16/2005
0:\Team_EIS\PFEIS\CADD\Reports\4fproperties\Figure 16_2_13 Plot.dgn
4 (f) Evalution

In addition, the *Analysis of the SR 167 Extension and Riparian Restoration Proposal in the Hylebos Watershed*, October 2004, also determined that flood impacts to the Interurban Trail will be limited to the 100-year storm event with the project's proposal to relocate Hylebos Creek and establish the riparian corridor.

Coordination

From the beginning of the planning process around 1990, a considerable effort has been made to include a wide assortment of groups and individuals as resources. A Steering Committee (which became a Partners Committee in Tier II) is comprised of representatives from the City of Puyallup, Port of Tacoma, City of Tacoma, City of Edgewood, FHWA, City of Fife, City of Milton, Pierce County, Pierce Transit, Puyallup Tribe, Puget Sound Regional Council, and WSDOT. A citizen's Advisory Committee was made up of citizens from the various jurisdictions who are affected by or interested in the project. Stakeholder interviews were held to solicit the opinions of representatives of the various jurisdictions. Design workshops were held with outside agencies to solicit their ideas about the project. A Value Engineering Study was conducted which looked at 67 options for the design of the I-5/SR 167 interchange. At least 4 open houses were held to present the project to the public and gather their input. Meetings have also been held with the Tacoma Chamber of Commerce, Edgewood Business Association, Puyallup River Watershed Council, and other businesses, developers, city councils, and local homeowners.

As part of the 404 Merger Agreement process, FHWA and WSDOT regularly met with the National Marine Fisheries Service, U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, Washington State Department of Ecology, and Washington State Department of Fish and Wildlife representatives.

Specific to the Section 4(f) resources, FHWA and WSDOT has closely coordinated with the SHPO, the cities of Fife, Puyallup, and Milton, Pierce County, and the Puyallup Tribe. A series of meetings was held in the spring and summer of 2004 with the cities and county for the expressed purpose of exploring joint development for the Fife Soccer Complex and Interurban Trail, providing access to the City of Fife Lower Hylebos Nature Park, and mitigating construction impacts to the Puyallup Riverfront Trail.

The Memorandum of Agreement (MOA) prepared to satisfy Section 106 requirements (draft in Appendix A) has been developed in cooperation with the SHPO and will be filed with the Advisory Council on Historic Preservation at the conclusion of the consultation. By circulation of this draft Section 4(f) Evaluation, comments will be sought from the U.S. Department of the Interior as required in 23 CFR §771.135(i).

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Appendices

Appendix A: Section 106

Appendix B: Letter, City of Puyallup, Concerning Riverfront Trail

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Appendix A: Section 106
Draft 4(f) Evaluation
SR 167 Puyallup to SR 509

A-1: May 14, 2004 Determinations of Eligibility and Adverse Effect, WSDOT

A-2: June 15, 2004 Determination of Eligibility, OAHP

A-3: July 13, 2004 ACHP Notification, FHWA

A-4: August 10, 2004 ACHP Response

A-5: Draft Section 106 MOA

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Washington State
Department of Transportation
Douglas B. MacDonald
Secretary of Transportation

14 May 2004

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P.O. Box 47300
Olympia, WA 98504-7300

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www.wsdot.wa.gov

Allyson Brooks, Ph.D.
State Historic Preservation Officer
Office of Archaeology and Historic Preservation
P.O. Box 48343
Olympia, WA 98504-8343

Re: SR 167 Puyallup to SR 509 Tier II EIS Project, Pierce County
Determinations of NRHP Eligibility and Adverse Effect
OAHP Log #: 042803-07-WSDOT

Dear Dr. Brooks:

Enclosed please find EWU's report (DOT01-14, dated May 2004), which includes a number of documents generated over the past several years for this project pursuant to compliance with Section 106 of the NHPA and 36CFR800. Staff in your office have reviewed and commented on all reports and property inventories recorded prior to the most recent field work by EWU, referenced below.

Also enclosed are determinations of NRHP eligibility on historic property inventory and archaeological site forms for eight properties identified during EWU's last (DOT04-08, April/May 2004, Appendix I in the larger report DOT01-14) survey and inventory efforts. (These properties have not previously been submitted to your office for comment). We have determined the John Baggenstos Farm (called "Former Farm" on the form) on N. Levee Road in Fife **eligible** for inclusion in the NRHP.

We have determined the other seven properties **ineligible** for inclusion in the NRHP. Ineligible properties include:

House at 4105 N. Levee Rd., Field #Fife-B-1
House at 3102 Frank Albert Rd., Field #Fife-C-1
Christoph House at 3206 Frank Albert Rd., Field #Fife-D-1
Garret Spies House at 3321 N. Levee Rd., Field #Fife-E-1
Abandoned House near Valley Rd. and 36th Ave. E., Field #Fife-E-1
Historic Scatter 1, Site #45PI661
Historic Scatter 2, Site #45PI664.

Based upon the above determinations, and previous WSDOT determinations and concurrences from your office, the following properties within the project's APE have been determined **eligible** for inclusion in the NRHP:

John Baggenstos Farm, N. Levee Road (Field # Fife-A-1)
Bungalow at 7001 20th St. East (OAHP #27-4125, WSDOT #P202)
Bungalow at 6803 20th St. East (OAHP #27-4154, WSDOT #P168)
Bungalow at 7717 Valley Ave. East (OAHP #27-4114, WSDOT #P239)
Bungalow at 3423 Freeman Rd. (OAHP #27-4160, WSDOT #P490)
Prehistoric Site (#45PI488, WSDOT #P134)

Also enclosed please find maps showing properties determined to be NRHP eligible, and their locations in relation to the proposed roadway. Based upon proximity and anticipated impacts to those properties, we have determined that the project will have adverse effects on historic properties. Specific properties that will likely be adversely affected include:

Bungalow at 7001 20th St. East (OAHP #27-4125, WSDOT #P202)
Bungalow at 6803 20th St. East (OAHP #27-4154, WSDOT #P168)
Bungalow at 7717 Valley Ave. East (OAHP #27-4114, WSDOT #P239)
Bungalow at 3423 Freeman Rd. (OAHP #27-4160, WSDOT #P490)

As you can see from the enclosed maps, the first three of the above properties (identified on the maps as P202, P168, and P239) will be dismantled due to their being within or near the project's construction footprint. The Bungalow at 3423 Freeman Rd. (P490) stands approximately 235 feet from the proposed right-of-way. Visual, audible, and atmospheric effects could be adverse at that location. The John Baggenstos Farm stands on the proposed wetland mitigation parcel (not shown on the maps) and will be avoided during enhancement of the proposed wetlands. Because all enhancement developments can be designed well away from the structures, no adverse effect is anticipated at the Baggenstos Farm.

Similarly, no adverse effect is anticipated to occur on the prehistoric site (#45PI488, WSDOT #P134, the site boundary for which is the irregular-shaped red line on the map within the larger rectangular parcel). A bridge has been designed to span the site, with the structure's piers to be situated outside the known boundaries of the site. Although elements of the site are not likely to be encountered, WSDOT will ensure that monitoring of construction of the pier is done in the vicinity of the gravel parking lot adjacent to the Vitamilk Dairy.

Due to WSDOT's inability to access some private properties, and the evolving nature of our wetland mitigation needs, we recognize the need to complete further cultural resources investigations. We think that the proper venue for addressing our commitment to completing our Sec. 106 obligations will be in the MOA developed to address mitigation of adverse effects for the project. At this time, we are proposing to complete large-format photo documentation to Historic American Building Survey (HABS) standards of the properties adversely affected.

I look forward to your concurrence with our determinations of NRHP eligibility and adverse effect, and to consulting with you in developing an MOA for the project. If you have concerns or questions, please contact me at 360-570-6639, email at holstinec@wsdot.wa.gov, or Michelle Elling at 360-570-6737. Thank you for your attention to these matters.

Sincerely,

C. Holstine

Craig Holstine
Cultural Resources Specialist

Enc.

Cc: Michelle Elling, WSDOT Olympic Region
Megan Hall, FHWA

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STATE OF WASHINGTON
Office of Archaeology and Historic Preservation
1063 S. Capitol Way, Suite 106 - Olympia, Washington 98501
(Mailing Address) PO Box 48343 - Olympia, Washington 98504-8343
(360) 586-3065 Fax Number (360) 586-3067

RECEIVED
JUN 18 2004

June 15, 2004

Mr. Craig Holstine
Cultural Resource Specialist
WSDOT Olympic Region
PO Box 47300
Olympia, Washington 98504-7300

In future correspondence please refer to:
Log: 042803-07-WSDOT
Property: SR 167, PUYALLUP TO SR 509
Re: Determination of Eligibility

RECEIVED
JUN 18 2004
ENVIRONMENTAL AFFAIRS POINT PLAZA

Dear Mr. Holstine:

Thank you for contacting the Washington State Office of Archaeology and Historic Preservation (OAHP). The above referenced project has been reviewed on behalf of the State Historic Preservation Officer under provisions of Section 106 of the National Historic Preservation Act of 1966 (as amended) and 36 CFR Part 800. My review is based upon documentation contained in your communication. Please note that we have responded to this project in two other letters, one dated 2-10-04 and one dated 4-9-04.

Research indicates that the no resources within the APE of the project are currently listed in the Washington Heritage Register or National Register of Historic Places. Below is our assessment of the final document as provided by your office. In review of the provided report and survey forms I have determined that a total of 64 surveyed resources are not eligible for the National Register of Historic Places. Five historic resources and 1 archaeological site have been determined eligible for the National Register of Historic Places. (See table below).

Below are the assessments for the various eligible properties and the affect determinations:

John Baggenstos Fram, N. Levee Rd.	Concur site is Eligible for NR	No Adverse Effect
6803 20th Street East	Concur site is Eligible for NR	Adverse Effect
7001 20th Street East	Concur site is Eligible for NR	Adverse Effect
7717 Valley Avenue East	Concur site is Eligible for NR	Adverse Effect
3423 Freeman Rd.	Concur site is Eligible for NR	Adverse Effect
45PI488	Concur site is Eligible for NR	No Adverse Effect

In summary, I have a total of 5 historic resources and 1 archaeological site eligible for the National Register of Historic Places, with four of the those properties having an Adverse Effect as a result of the proposed project.

As a result of these finding, further contact with OAHP will be necessary since the project involves federal funds, permits or licenses and an MOA will need to be developed to mitigate the impacts to the eligible historic and cultural resources.

Thank you for the opportunity to review and comment. Should you have any questions please feel free to contact me.

Sincerely,

Michael Houser
Architectural Historian
(360) 586-3076
MichaelH@cted.wa.gov

U.S. Department of Transportation
Federal Highway Administration

Washington Division

Suite 501 Evergreen Plaza
711 South Capitol Way
Olympia, Washington 98501-1284
(360) 753-9480
(360) 753-9889 (FAX)
http://www.fhwa.dot.gov/wadiv

July 13, 2004

HFO-WA2/SR 167

Mr. Don L. Klima, Director
Western Office of Planning Review
Advisory Council on Historic Preservation
12136 West Bayaud Avenue, Suite 330
Lakewood, Colorado 80228

SR 167 Extension, Puyallup to SR 509
Pierce County, Washington

Dear Mr. Klima:

The Washington State Historic Preservation Office determined that five historic resources and one archaeological site have been determined eligible for the National Register of Historic Places. Attached for your information is correspondence from the SHPO for the subject project, a vicinity map, and excerpts from the Cultural Resource Report for background information.

In compliance with the revised Section 106 of the National Historic Preservation Act regulations effective January 11, 2001, Section 800.6(a)(1), we are notifying you that the proposed SR 167 Extension Project will have an adverse effect on the four structures describe in the attached documentation.

Pursuant to 36 CFR §800.6(a)(1), please notify us within fifteen days if you wish to participate in this project and be included as a signature authority on the MOA.

If you have any questions or require additional information on this project, please feel free to contact me at (360) 753-8079 or via email at **megan.hall@fhwa.dot.gov**.

Sincerely,

DANIEL M. MATHIS, P.E.
Division Administrator

Megan P Hall

By: Megan P. Hall
Area Engineer

Enclosure

cc: Dr. Allyson Brooks, SHPO
Sandie Turner, WSDOT, OSC
Michelle Elling, WSDOT OR

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Preserving America's Heritage

August 10, 2004

Daniel M. Mathis
Division Administrator
Federal Highway Administration
Suite 501 Evergreen Plaza
711 South Capitol Way
Olympia, WA 98501-1284

REF: *Pierce County, SR 167 Extension Project.*

Dear Mr. Mathis:

We received your notification and supporting documentation regarding the adverse effects of the referenced project on a property or properties eligible for inclusion in the National Register of Historic Places. Based upon the information you provided, we do not believe that our participation in consultation to resolve adverse effects is needed. However, should circumstances change, please notify us so we can re-evaluate if our participation is required. Pursuant to 36 CFR 800.6(b)(iv), you will need to file the Memorandum of Agreement, and related documentation at the conclusion of the consultation process. The filing of this Agreement with the ACHP is necessary to complete the requirements of Section 106 of the National Historic Preservation Act.

Thank you for providing us with your notification of adverse effect. If you have any questions, please contact Carol Legard at 969-5110 or via eMail at clegard@achp.gov.

Sincerely,

Nancy Kochan

Nancy Kochan
Office Administrator/Technician
Western Office of Federal
Agency Programs

ADVISORY COUNCIL ON HISTORIC PRESERVATION

12136 West Bayaud Avenue, Suite 330 • Lakewood, Colorado 80228
Phone: 303-969-5110 • Fax: 303-969-5115 • achp@achp.gov • www.achp.gov

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DRAFT MEMORANDUM OF AGREEMENT
BETWEEN THE FEDERAL HIGHWAY ADMINISTRATION AND THE WASHINGTON STATE HISTORIC PRESERATION OFFICE PURSUANT TO 36 CFR Part 800.6(a)

WHEREAS, the US Department of Transportation, Federal Highway Administration (FHWA) has provided financial assistance to the Washington State Department of Transportation (WSDOT) for completion of SR 167 freeway between SR 161 (Meridian Street North) in Puyallup and SR 509 freeway in Tacoma, located in Pierce County, Washington, Federal Aid Project No. STPUL-0167(026); and

WHEREAS, WSDOT has completed a cultural resources survey in the area of potential affect as follows:

- Historic Property inventory/evaluation within a 400 foot offset on either side of the centerline established in the Environmental Impact Statement (EIS) process; and
- Cultural Resources ground survey within a 200 foot offset on either side of the centerline established in the EIS process and any additional right of way required for actual construction including interchanges, stormwater facilities, mitigation sites, and Park & Ride facilities. Subsurface testing was performed in areas as determined by a geomorphologist; and
- Consultation on Traditional Cultural Properties with the Puyallup Tribe of Indians (Tribe).

WHEREAS, FHWA has determined, and the State Historic Preservation Office (SHPO) has concurred, that the SR 167 Puyallup to SR 509 project (the undertaking) will have an adverse effect upon the following properties determined to be eligible for inclusion in the National Register of Historic Places:

- Bungalow at 7001 20th St. East (OAHP #27-4125, WSDOT #P202)
- Bungalow at 6803 20th St. East (OAHP #27-4154, WSDOT #P168)
- Bungalow at 7717 Valley Ave. East (OAHP #27-4114, WSDOT #P239)
- Bungalow at 3423 Freeman Rd. (OAHP #27-4160, WSDOT #P490)

WHEREAS, FHWA has determined, and the State Historic Preservation Office (SHPO) has concurred, that the SR 167 Puyallup to SR 509 project (the undertaking) will not have an adverse effect upon the archeological site, prehistoric site 45PI488, determined to be eligible for inclusion in the National Register of Historic Places; and

WHEREAS, FHWA has notified the Advisory Council on Historic Preservation (ACHP) of the effects pursuant to 36 CFR Part 800.6(a)(i), regulations effective January 11, 2001, implementing Section 106 of the National Historic Preservation Act (16 U.S.C. 470f); and

WHEREAS, the Advisory Council has declined to participate, but requests that pursuant to 36 CFR 800.6(b)(iv), a Memorandum of Agreement (Agreement), be developed in consultation with the SHPO, and related documentation be filed with the ACHP at the conclusion of the consultation process; and

WHEREAS, a Department of the Army permit, pursuant to Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act, will be required from the United States Army Corps of Engineers, Seattle District, (COE), to conduct activities related to the construction of SR 167, Puyallup to SR 509, and has been invited to be a signatory to this agreement; and

WHEREAS, the Washington State Department of Transportation (WSDOT) participated in the consultation and has been invited to be a signatory to this agreement; and

WHEREAS, formal Section 106 consultation pursuant to 36 CFR 800.2(a)(4) was initiated with the Puyallup Tribe in 2000. The Tribe then designated the Tribal Historic Official and the Cultural Resources Technical Advisor as lead contacts for the Tribe on cultural resource-related matters involving WSDOT and/or the FHWA. The Tribe has participated in the consultation and has been invited to be a signatory to this agreement; and

NOW, THEREFORE, the FHWA, COE, WSDOT, Puyallup Tribe, and the Washington SHPO agree that the undertaking shall be implemented in accordance with the following stipulations in order to take into account the effect of the undertaking on historic properties.

STIPULATIONS

The FHWA will ensure that the following measures are carried out:

1) To minimize visual effects, WSDOT will plant riparian vegetation on the outer edges of the proposed ramp curve nearest the 3432 Freeman Road historic property.

2) Historic Property Recordation:

   WSDOT will consult with the SHPO regarding appropriate large-format photo documentation to consistent with OAHP Level 2 standards of historic properties, 700120th Street East, 6803 20th Street East, and 7717 Valley Avenue East, in the project's area of potential effect.

3) NRHP-eligible buildings as described in 2, above, will be offered for sale for a minimum of one year to any buyers willing to move the structures.

4) The project will have no adverse effect upon prehistoric site 45PI488, contingent upon WSDOT:
   (a) Spanning the site with a bridge whose piers are constructed outside the known boundaries of the site; and
   (b) Monitoring construction for cultural resources in the vicinity. Should cultural resources or human remains be discovered during bridge construction, procedures will be followed per below (items 5 and 6).

5) Review of Effects Determination:
   Because design has yet to be finalized and because construction may not occur for some time, during final design and prior to construction of the undertaking, FHWA will review the eligibility determinations to:

   a) Determine if eligible properties retain the qualities that make them eligible for the National Register of Historic Places; and
   b) Determine if non-eligible properties obtained qualities that would make them eligible for the National Register of Historic Places (i.e. greater than 50 years old).

6) Amendment of the Agreement:
   If any of the signatories to this Agreement determine that the terms of the Agreement cannot be met or believe a change is necessary, that signatory will immediately request

the signatory parties to consider an amendment or addendum which will be executed in the same manner as the original Agreement. A copy of the amended Agreement will be filed with the ACHP, pursuant to 36 CFR 800.6(c)(7).

7) Dispute Resolution:
   a) If a dispute arises regarding implementation of this Agreement, the signatory parties will consult with the objecting party to resolve the dispute. If FHWA determines that the dispute cannot be resolved, FHWA shall forward all documentation relevant to the dispute to the ACHP and request comment, which will be provided pursuant to 36 CFR 800.6(b).
   b) If at any time during implementation of the measures stipulated in this Agreement, should an objection to any such measure or its manner of implementation be raised by a member of the public, the FHWA shall take the objection into account and consult as needed with the objecting party, the SHPO, or the ACHP to resolve the objection.

8) Failure to Carry Out Terms:
   Failure to carry out the terms of this Agreement requires that FHWA again request the ACHP's comments in accordance with 36 CFR Part 800.7. If FHWA cannot carry out the terms of the Agreement: (i) it will not take or sanction any action to make an irreversible commitment that would result in an adverse effect with respect to the eligible property covered by the Agreement; (ii) nor will FHWA foreclose the ACHP's consideration of modifications or alternatives that could avoid or mitigate the adverse effect on the property until the commenting process has been completed.

9) Duration & Termination:
   This MOA will take effect immediately upon execution by the Signatory Parties. The terms of this MOA shall be satisfactorily fulfilled within ten years following the date of execution. Prior to such time, FHWA may consult with the other signatories to reconsider the terms of the agreement and propose its amendment. Unless terminated, this MOA will be in effect until FHWA, in consultation with SHPO, COE, WSDOT, and the Tribe, determines that all of its terms have been satisfactorily fulfilled within ten years.

   In accordance with 36 CRF 800.6(c)(8), if any of the Signatory Parties determines that the terms of the MOA cannot or are not being carried out, they may consult to seek an amendment of the Agreement. If the Agreement is not amended, any Signatory may terminate this MOA. If either FHWA, COE, or the SHPO proposes to terminate this MOA, the terminating party shall promptly notify all other parties in writing of the proposed termination and shall include in its notification the reasons for proposing termination. If the MOA is terminated pursuant to this stipulation and FHWA determines that its undertaking will nonetheless proceed, FHWA shall request the comments of the ACHP.

11) Monitoring and Reporting:
   Within 90 Days after carrying out the terms of the Agreement, as described in Stipulations 1 through 4, the WSDOT shall report to all signatories on the actions taken.

   This Memorandum of Agreement by the FHWA and the Washington SHPO, shall not be executed until filed with the ACHP, evidence that the FHWA has afforded

the ACHP an opportunity to comment on the SR 167 Puyallup to SR 509 Highway Project and its effects on historic properties. Implementation of its terms is evidence that the FHWA has taken into account its effects on historic properties and has satisfied the requirements of Section 106 of the National Historic Preservation Act (16 U.S.C. 470(f)).

SIGNATORIES

Federal Highway Administration

By:_____ Date:_____

Daniel Mathis
Division Administrator

Washington State Historic Preservation Office

By:_____ Date:_____

Allyson Brooks, Ph.D.
State Historic Preservation Officer

INVITED SIGNATORY PARTIES

Washington State Department of Transportation

By:_____ Date:_____

Tom Whitney
Acting Region Environmental & Hydraulic Manager
Olympic Region

The Puyallup Tribe of Indians

By:_____ Date:_____

Herman Dillon, Sr.
Puyallup Tribal Council Chair

US Army Corps of Engineers

By:_____ Date:_____

COE Debra Lewis
District Engineer

Attachments:

1) SR 167 Vicinity Map

Appendix B: Letter, City of Puyallup, Concerning Riverfront Trail

Draft 4(f) Evaluation
SR 167 Puyallup to SR 509

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CITY OF PUYALLUP
Development Services Department
218 West Pioneer
Puyallup WA 98371
253.841.5444 Voice/ 253.840.6678 Fax
steve@ci.puyallup.wa.us

May 14, 2004

Jeff Sawyer
Olympic Region Headquarters
Washington State Dept. of Transportation
P.O. Box 47440
Olympia, WA 98504–7440

Re: SR 167 Tier II EIS, Puyallup to SR 509

This week, I met with Michelle Elling, Lone Moody, and Darryl Tinnerstet to discuss this project and its potential impacts on publicly–owned facilities within the City of Puyallup. This meeting partially in response to your inquiry of February 23 regarding identified facilities and whether 6(f) monies were used for their purchase: 1) Puyallup Recreation Center; 2) Puyallup River Levee Trail; 3) Malone Marker; and 4) North Levee Trail (planned).

No 6(f) funds were used to purchase any of these facilities. It should also be noted that the City does not have any plans to construct a "North Levee Trail;" all our efforts are focused on completing the Riverfront Trail (Puyallup River Levee Trail) on the south side of the river. We are unaware if the City of Fife and Pierce County are planning to construct such a trail to the west of the city limits.

It was my understanding that reconstruction of the Meridian bridge across the Puyallup River could result in temporary closure of this portion of the Riverfront Trail. The City is committed to working cooperatively with WSDOT in identifying an acceptable interim route for the trail during the course of construction.

We hope to begin construction of the western extension of the Riverfront Trail later this year, with the eastern leg possibly being constructed in 2005/2006.

Please feel free to contact me with any further questions.

Steve Pilcher
Planning Manager

cc: Tom Heinecke, Administrator

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STATE OF WASHINGTON

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION

1063 S. Capitol Way, Suite 106 • Olympia, Washington 98501
Mailing address: PO Box 48343 • Olympia, Washington 98504-8343
(360) 586-3065 • Fax Number (360) 586-3067 • Website: www.dahp.wa.gov

October 8, 2012

Mr. Roger Kiers
Cultural Resources Specialist
WSDOT, Olympic Region
P.O. Box 47332
Olympia, WA 98512-7332

In future correspondence please refer to:
Log: 042803-07-WSDOT
Property: SR 167, PUYALLUP TO SR 509
Re: ADVERSE Effect

Dear Mr. Kiers:

Thank you for contacting the Department of Archaeology and Historic Preservation (DAHP). We have reviewed the materials you provided for this project. We concur with the undertaking's revised Area of Potential Effects. We also concur with your determination that the project, as proposed, will have an Adverse Effect on the Meridian Street Bridge which is eligible for listing on the National Register of Historic Places.

We look forward to further consultation and the revision of the Memorandum of Agreement (MOA) to address this Adverse Effect, and inclusion of programmatic elements to insure cultural resources identification and evaluation work is completed as the project moves forward.

We would appreciate receiving any correspondence or comments from concerned tribes or other parties that you receive as you consult under the requirements of 36CFR800.4(a)(4) and the survey report when it is available. These comments are based on the information available at the time of this review and on behalf of the State Historic Preservation Officer pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations 36CFR800.

Thank you for the opportunity to review and comment.

Sincerely,

Lance Wollwage, Ph.D.
Transportation Archaeologist
(360) 586-3536
lance.wollwage@dahp.wa.gov

Washington State Department of Transportation
Paula J. Hammond, P.E.
Secretary of Transportation

Transportation Building
310 Maple Park Avenue SE
Olympia, WA 98504-7300
360-705-7000
TTY: 1-800-833-6388
www.wsdot.wa.gov

August 28, 2012

Allyson Brooks, Ph.D.
State Historic Preservation Officer
Department of Archaeology & Historic Preservation
PO Box 48343
Olympia, WA 98504-8343

RE: State Route 167 Extension – Puyallup to SR 509 Freeway Construction Project,
Puyallup River (Meridian Street) Bridge Phase
Cultural Resources Survey and Determination of Adverse Effect

Dear Dr Brooks:

The Washington State Department of Transportation (WSDOT), in cooperation with the Federal Highway Administration (FHWA), is continuing to develop the subject undertaking to address an identified transportation need in Pierce County. In order to ensure that we take into account the effects of this undertaking on properties listed in or eligible for listing in the National Register of Historic Places, WSDOT is continuing formal Section 106 consultation pursuant to 36 CFR 800.2(c)(4).

First, we would like to clarify the scope of our ongoing Section 106 consultation for this federal aid highway project, specifically as it relates to how the currently proposed bridge replacement is associated with the larger State Route (SR) 167 corridor extension project. The SR 167 corridor extension project underwent National Environmental Policy Act (NEPA) and Section 106 review between 1991 and 2006[1]. The resulting NEPA review documented Section 106 consultation culminating in execution of a Memorandum of Agreement (MOA). While the corridor extension project had always proposed replacement of the Meridian Street Bridge, it was not deemed eligible for the National Register at the time of the 2006 Final Environmental Impact Statement and Section 106 consultation. Funding for an interim phase of the corridor extension project was dedicated by the 2011 legislature to address structural deficiency found to exist with the Meridian Street Bridge. Through a December 20, 2011 letter, WSDOT initiated ongoing consultation on a slightly refined APE for this funded phase of the SR 167 corridor extension project.

Environmental documentation for the SR 167 corridor extension project identified and addressed the need to reconstruct the Puyallup River crossings including removal of the Meridian Street Bridge. The ultimate solution will require a new 4-lane bridge to replace the 2-lane northbound bridge. The bridge location is constrained by the fully developed surrounding environment, the adjacent two-lane southbound bridge, and close proximity of the future SR 167/SR 161 interchange that will be a part of the expansion of the SR 167 Freeway. Proceeding with this phase of the corridor extension project now requires updating the existing NEPA and Section 106 documentation to address the changed condition, which is the recently determined National Register eligibility of the Meridian

[1] *State Route 167, Puyallup to SR 509 Tier II Final EIS* – FHWA/WSDOT November 2006

Street Bridge. In addition, due to the passage of time and in accordance with Stipulation VII.E of the *Second Amended Programmatic Agreement Implementing Section 106 of the National Historic Preservation Act for the Federal-aid Highway Program in Washington State Administered by the Federal Highway Administration*, WSDOT is re-evaluating the previous cultural resources investigations and reports used to support the Section 106 review process. The intent of this re-evaluation process is to evaluate the undertaking in (or near) its final design. At this time, only the Meridian Street Bridge phase of the SR 167 corridor extension has received full design and construction funding and advanced to a point where WSDOT is prepared to re-evaluate and supplement the cultural resources documentation.

The proposal to address the structurally deficient Meridian Street Bridge is not an independent action with a discrete APE and Section 106 consultation, but rather is a phase of the overall SR 167 corridor extension. Since the corridor project was still in the early design stages during the Tier 2 EIS process, the previous cultural resources studies and the 2006 MOA used a corridor approach to define the APE. As agreed to in the MOA, stipulation 5 (Review of Effects Determination), FHWA is reviewing the changes to the APE as the final bridge design is funded for construction. WSDOT originally defined the APE for the larger SR 167 corridor extension project to include an area of direct effects within a 200 foot offset on either side of the new highway centerline established in the EIS process, as well as any additional right-of-way required for actual construction including interchanges, stormwater facilities, and mitigation sites. The vertical extent of this area of potential direct effects was considered to be three feet. The APE also included an additional 200 foot offset, extending 400 feet from either side of the centerline, to account for potential indirect visual or audible effects.

The APE defined for the SR 167 corridor extension project did not encompass the entire area that will be affected by the replacement of the Meridian Street Bridge. WSDOT therefore revised the horizontal and vertical APE (within the footprint of the bridge replacement phase of the project) to include all areas where ground-disturbing activities associated with the new bridge will occur. The revised APE also includes the area within which the historic bridge and adjacent historic structures may be directly or indirectly affected by the project. Bridge replacement project work will include bridge piers, abutments, roadway approaches, bridge superstructure, and some grading and re-vegetation. It also includes improvements to the stormwater system, which, on the west side of SR 167 north of the river, will be completely replaced, including construction of a stormwater swale, where the depth of excavation will be up to four feet. At the locations of the new bridge abutments, which will require deep excavation, the vertical APE has been defined as 100 feet.

The enclosed report supplements the cultural resources survey previously completed for the SR 167 Extension Project between 2000 and 2004 by Archaeological and Historical Services (AHS). The current effort included drilling of sonic boreholes where deep excavation will be required for the new bridge abutments, excavation of shovel probes within an area of proposed stormwater improvements, and an inventory and (re)evaluation of historic structures within the area that will be affected by the Meridian Street Bridge phase of the SR 167 corridor project.
No archaeological resources were identified within the Meridian Street Bridge project area. Five historic structures were inventoried and (re)evaluated, one of which (the Meridian Street Bridge) is eligible for listing in the NRHP. Evaluation of project alternatives indicates that adverse effects to the Meridian Street Bridge are unavoidable.

To date, WSDOT and FHWA have convened two meetings (March 26 and June 20, 2012) with consulting parties as we seek ways to avoid, minimize and mitigate adverse effects to the Meridian Street Bridge. We will continue Section 106 consultation to resolve these adverse effects.

Per the existing Project MOA, which will be amended to resolve adverse effects to the Meridian Street Bridge, and per Stipulation VII.E of the *Second Amended Programmatic Agreement Implementing Section 106 of the National Historic Preservation Act for the Federal-aid Highway Program in Washington State Administered by the Federal Highway Administration*, the SR 167 corridor APE will be reviewed and refined as necessary when future phases are funded. In order to provide a preliminary assessment of the larger APE, WSDOT has prepared the enclosed figures showing the SR 167 corridor APE surveyed by AHS between 2000 and 2004 as it relates to the latest proposed alignment of SR 167. For comparison, the 200-foot and 400-foot offsets surveyed by AHS have been overlaid on 200-foot and 400-foot offsets from the current proposed centerline. It is evident that the AHS survey did not encompass the entire alignment as it is currently proposed. In addition, wetland mitigation areas are yet to be defined. As stated above, the discrepancies in the previous cultural resources survey will be addressed when additional funding is acquired and design has proceeded to a point where we are able to accurately and correctly characterize and evaluate the undertaking's potential effects on historic properties.

We invite your review of the enclosed report and request your concurrence with our determination of adverse effect for the project, due to the anticipated effects to the Meridian Street Bridge. If you have questions or comments regarding the proposed project, you may contact me by phone at 360-570-6638, or by email at kiersro@wsdot.wa.gov.

Sincerely,

Roger Kiers
WSDOT Archaeologist

Enclosures: Cultural Resources Program Report No. 12-10 (PDF on CD)
SR 167 Corridor APE Plan Sheets

cc: Jeff Sawyer, WSDOT Olympic Region EHS
Brenden Clarke, Project Engineer, WSDOT SR 167 Puyallup River Bridge Project
Dean Moberg, Area Engineer, FHWA
Alisa Ralph, Regulatory Branch Section Chief, USACE

Cultural Resources Discipline Report

State Route 167 Puyallup River/Meridian Street Bridge Phase, SR 167 Extension – Puyallup to SR 509 Freeway Construction Project, Pierce County, Washington

Cultural Resources Program Report No. 12-10

Roger Kiers, M.A.
Craig Holstine, M.A.

August 2, 2012

Washington State
Department of Transportation
Environmental Services Office
PO Box 47332
Olympia, WA 98504-7332

Executive Summary

The Washington State Department of Transportation (WSDOT) is proposing the State Route (SR) 167 Puyallup River/Meridian Street Bridge Project to construct a new two-lane, three-span bridge across the Puyallup River on State Route (SR) 167 and to take the existing Meridian Street Bridge out of service. The project is located in the City of Puyallup, Pierce County, in Township 20 North, Range 4 East, Sections 21 and 22.

This bridge project is a recently-funded phase of a larger undertaking – the SR 167 Extension – Puyallup to SR 509 Freeway Construction Project – which is an unfunded corridor project that will extend SR 167 between SR 161 in Edgewood and SR 509 in Tacoma. The northbound lanes of SR 167 currently cross the Puyallup River on the existing Meridian Street Bridge (Bridge No. 167/20E), which is a structurally deficient steel truss bridge built in 1925 and modified in 1951. The bridge was added to the *P2 Program Bridge Replacement List* funded in the 2011-2013 biennium and the Legislature subsequently mandated that this project use the Design-Build process for project delivery. A new two-lane, three-span bridge over the Puyallup River is proposed downstream of the current crossing. Approaches and new alignments will also be constructed to tie into the existing highway. Project work will include bridge piers, abutments, roadway approaches, bridge superstructure, and improvements to the stormwater system.

As part of the SR 167 Extension – Puyallup to SR 509 Project documentation completed in 2000, the existing Meridian Street Bridge was determined not eligible for listing in the National Register of Historic Places (NRHP). However, recent reevaluation has indicated that the bridge is eligible for the NRHP under Criterion C. In addition to documenting and evaluating the Meridian Street Bridge, the current report supplements the cultural resources survey previously completed for the SR 167 Extension Project between 2000 and 2004 by Archaeological and Historical Services (AHS) (Luttrell 2004), in order to assist the Federal Highway Administration (FHWA) and WSDOT in compliance with the National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act (NHPA). The current effort included drilling of sonic boreholes where deep excavation will be required for the new bridge abutments, excavation of shovel probes within an area of proposed stormwater improvements, and an inventory of additional historic structures within the Meridian Street Bridge Area of Potential Effects.

No archaeological resources were identified within the Meridian Street Bridge project area. Of the historic cultural resources recorded within the project area, only the Meridian Street Bridge is eligible for listing in the NRHP. WSDOT and FHWA will continue Section 106 consultation and seek ways to avoid, minimize, or mitigate adverse effects to the Meridian Street Bridge.

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Project Description and Location

The Washington State Department of Transportation (WSDOT) is proposing the State Route (SR) 167 Puyallup River/Meridian Street Bridge Project to construct a new two-lane, three-span bridge across the Puyallup River on State Route (SR) 167 and to take the existing Meridian Street Bridge out of service. The project is located in the City of Puyallup, Pierce County, in Township 20 North, Range 4 East, Sections 21 and 22 (Figure 1).

This bridge project is a recently-funded phase of a larger undertaking – the SR 167 Extension – Puyallup to SR 509 Freeway Construction Project – which is an unfunded corridor project that will extend SR 167 between SR 161 in Edgewood and SR 509 in Tacoma. The northbound lanes of SR 167 currently cross the Puyallup River on the existing Meridian Street Bridge (Bridge No. 167/20E), which is a structurally deficient steel truss bridge built in 1925 and modified in 1951. In 2011, WSDOT implemented a load restriction requiring vehicles larger than 10,000 pounds to use the right lane only, due to floor beam deterioration that was detected during a routine bridge inspection. The bridge was added to the *P2 Program Bridge Replacement List* funded in the 2011-2013 biennium and the Legislature subsequently mandated that this project use the Design-Build process for project delivery. The goal of this project is to provide bridges and a roadway profile compatible with the larger SR 167 Extension – Puyallup to SR 509 undertaking, which is currently in the preliminary engineering stage and for which new right-of-way has been acquired.

The new two-lane, three-span bridge over the Puyallup River will have abutments on both banks and a pier in the river. Approaches and new alignments will also be constructed to tie into the existing highway. The new bridge will require a higher profile than the existing roadway to provide adequate clearance over frontage roads on both sides of the Puyallup River. Retaining wall construction will be included to minimize right-of-way impacts. Project work will include bridge piers, abutments, roadway approaches, bridge superstructure, and some grading and re-vegetation. It also includes improvements to the stormwater system, which, on the west side of SR 167 north of the river, will be completely replaced, including construction of a stormwater retention pond.

Project History

The Federal Highway Administration (FHWA) approved the Tier I Environmental Impact Statement (EIS) for the larger SR 167 Puyallup to SR 509 undertaking, identifying a preferred route, in 1999. WSDOT began further study of the selected corridor in spring of 1999 with the Tier II EIS, and FHWA published the Tier II Final EIS, outlining plans to avoid or lessen the undertaking's potential environmental impacts, in December 2006. FHWA approved the Tier II FEIS by signing the Record of Decision in October 2007, completing the environmental documentation process and allowing WSDOT to proceed with advanced engineering and design work. Right-of-way acquisition and engineering have proceeded as funding allowed, but construction funding has not yet been identified.

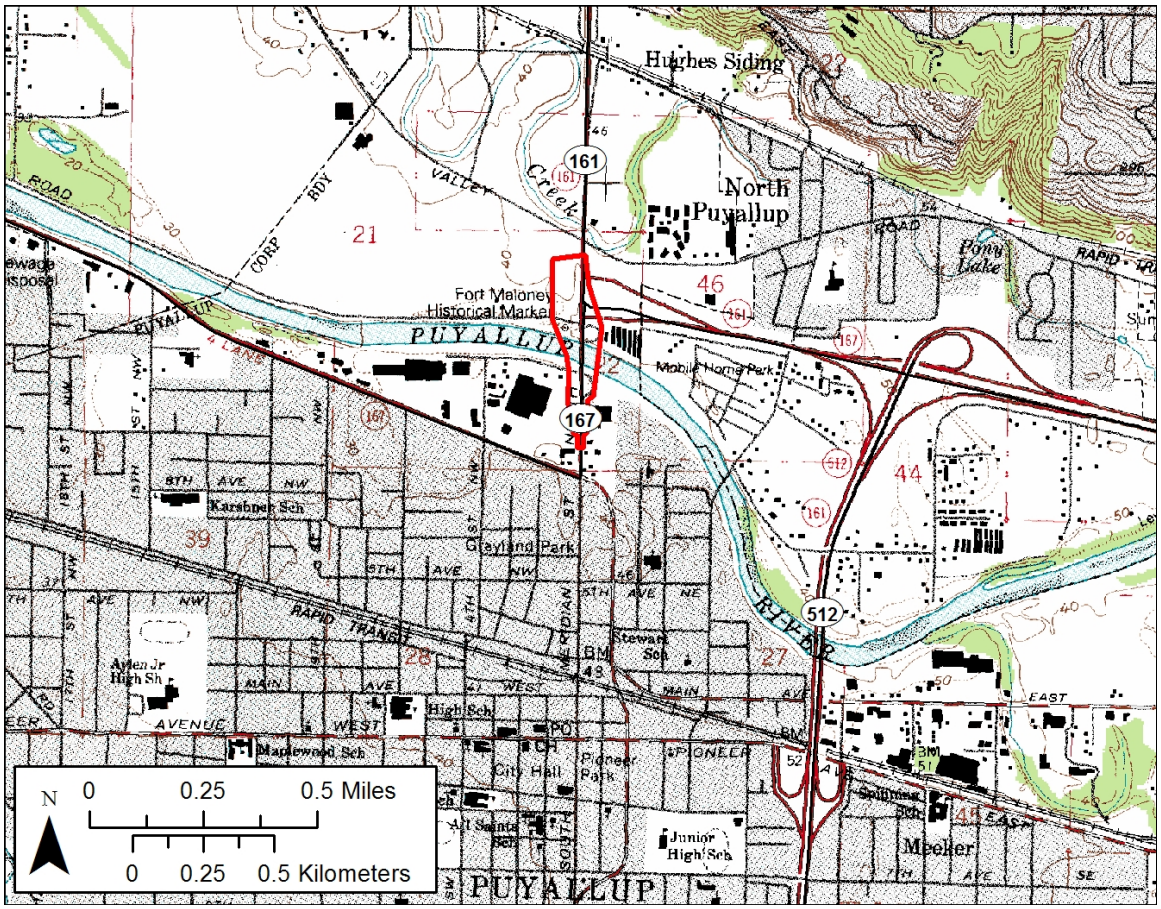

Figure 1. Project area vicinity, on USGS 7.5' Puyallup Quadrangle.

The delivery strategy identified in the SR 167 – Puyallup to SR 509 EIS was to replace the steel truss Puyallup River Bridge with a new five-lane structure and to perform a seismic retrofit and a small taper widening to the existing 1971 concrete bridge. This was to be done by utilizing a detour structure to shift northbound traffic off of the steel truss, and far enough to the east to allow a five-lane structure to be constructed. The next step was to remove the steel truss and construct the new five-lane structure. Northbound traffic would then be shifted onto the new five-lane bridge, and the temporary detour structure would be removed. The final stage was to be seismic retrofit of the existing concrete bridge and a taper widening of the north end to match into the new SR 161/167 Interchange. This configuration of five northbound lanes across the Puyallup River is necessary to accommodate anticipated traffic and attendant lane-changing in the relatively short distance between the Puyallup River and the new SR 161/167 Interchange to the north.

Since the EIS was completed, seismic standards have been revised to render retrofitting of the 1971 concrete bridge economically unfeasible. In addition, as part of the SR 167 Extension – Puyallup to SR 509 Project documentation completed in 2000, the existing Meridian Street Bridge was determined not eligible for listing in the National Register of Historic Places (NRHP). However, subsequent reevaluation indicated that the bridge is eligible for the NRHP.

In addition to documenting and evaluating the Meridian Street Bridge, the current report supplements the cultural resources survey previously completed for the SR 167 Extension Project between 2000 and 2004 by Archaeological and Historical Services (AHS) (Luttrell 2004). Particular attention is given to areas where deep excavation will be required for the Puyallup River Bridge project.

Regulatory Context

The objective of this inventory is to assist FHWA and WSDOT in compliance with NEPA and Section 106 of the NHPA of 1966, as amended, and its implementing regulation (36 CFR 800). The NHPA requires that federal agencies identify and assess the effects of federally assisted undertakings on historic properties, and consult with others to find acceptable ways to avoid, minimize, or mitigate adverse effects.

This inventory seeks to identify archaeological and historic resources within the project area of potential effects (APE), assess any identified resources for eligibility to the National Register of Historic Places, and recommend any additional measures for further characterization or evaluation of cultural resources within the APE.

Area of Potential Effects (APE)

WSDOT defined the Area of Potential Effects for the larger SR 167 Extension, Puyallup to SR 509 Project to include an area of direct effects within a 200 foot offset on either side of the new highway centerline established in the EIS process, as well as any additional right-of-way required for actual construction including interchanges, stormwater facilities, and mitigation sites. The vertical extent of this area of potential direct effects was considered to be three feet. The APE also included an additional 200 foot offset, extending 400 feet from either side of the centerline, to account for potential indirect visual or audible effects.

The APE defined for the SR 167, Puyallup to SR 509 Project did not encompass the entire area that will be affected by the replacement of the Meridian Street Bridge. WSDOT has therefore revised the horizontal and vertical APE to include all areas where ground-disturbing activities associated with the new bridge will occur as shown on Figure 2. The APE also includes the area within which the historic bridge and adjacent historic structures may be directly or indirectly affected by the project. Project work will include bridge piers, abutments, roadway approaches, bridge superstructure, and some grading and re-vegetation. It also includes improvements to the stormwater system, which, on the west side of SR 167 north of the river, will be completely replaced, including construction of a stormwater retention pond, where the depth of excavation will be up to four feet. At the locations of the new bridge abutments, which will require deep excavation, the vertical APE has been considered as 100 feet, based on the anticipated depth of the Osceola Mudflow and subsequent alluvial deposition. Only the Puyallup River Bridge project area is the subject of the current report; any outstanding areas of the larger SR 167 APE requiring Section 106 review or reevaluation will be addressed during future project phases.

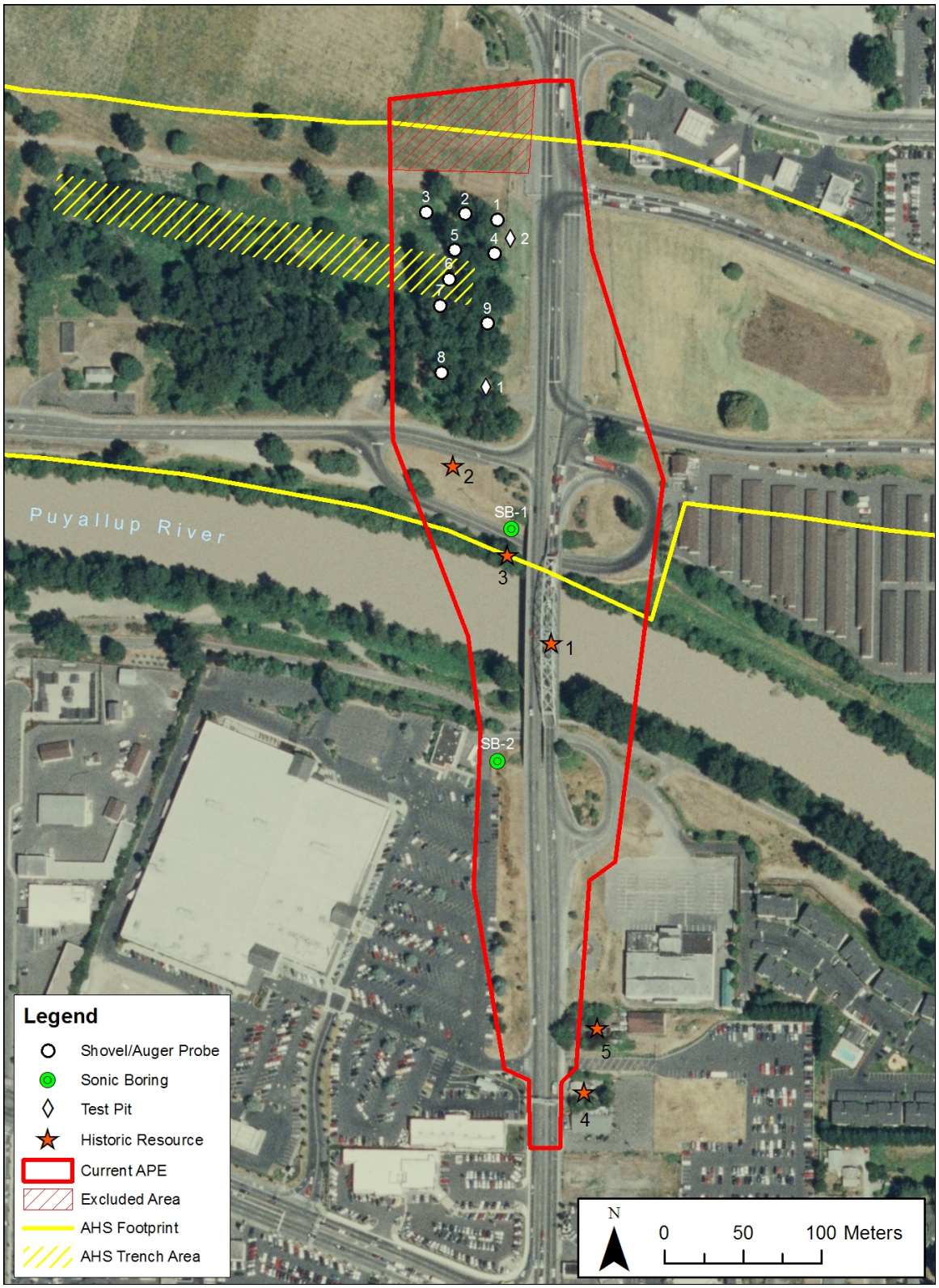

Figure 2. Area of Potential Effects, showing locations of previous survey work by AHS, and survey locations included within the present study.

NRHP Eligibility Criteria

The National Historic Preservation Act requires federal agencies to identify and consider the effects of federally assisted projects on historic properties. Historic properties generally must be at least 50 years old and meet at least one of four criteria of significance. According to the National Register of Historic Places (NRHP) Criteria for Evaluation:

> "The quality of significance in American history, architecture, archeology, engineering and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:
>
> A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
> B. That are associated with the lives of significant persons in our past; or
> C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
> D. That have yielded or may be likely to yield, information important in history or prehistory (NRHP)."

Amendments to Section 101 of the NHPA in 1992 allowed inclusion of eligible properties of traditional cultural or religious importance to the National Register.

Consultation

WSDOT, on behalf of FHWA, consults with the Washington State Historic Preservation Officer (SHPO) and the appropriate Native American Tribes who may have an interest in the project area, pursuant to the *First Amended Programmatic Agreement Implementing Section 106 of the National Historic Preservation Act for the Federal-aid Highway Program in Washington State Administered by the Federal Highway Administration*. In January 2012, WSDOT initiated consultation with the Muckleshoot Indian Tribe, Puyallup Tribe, Squaxin Island Tribe, and Yakama Nation. The Squaxin Island Tribe responded and deferred further consultation to the Puyallup Tribe. The Puyallup Tribal Archaeologist visited the project area during the sonic borehole fieldwork.

WSDOT also initiated Section 106 consultation with local governments and a number of individuals and organizations considered likely to have an interest in the undertaking due to potential effects to the Meridian Street Bridge. To date, WSDOT has convened two consulting party meetings, on March 26 and June 20, 2012. Section 106 consultation will continue as FHWA and WSDOT seek ways to avoid, minimize, or mitigate adverse effects to the Meridian Street Bridge that could result from the project.

Study Methodology

Records Review

Background research completed for this study included a review of available literature on the natural and cultural history of the project area, including previous survey reports on file at DAHP, with a focus on reports completed since the 2004 AHS report. Project records, including field notes, were obtained from AHS for this study, providing specific details about the methods and results of the AHS survey not included in their 2004 report.

Other archival sources included the Washington State Library, the library of the WSDOT Cultural Resources Program, the Washington Department of Archaeology and Historic Preservation (DAHP) WISAARD database, Bureau of Land Management Land Status and Cadastral Records Viewer, Puget Sound River History Project, University of Washington Library, and Pierce County Assessor's Office.

Field Methods

Archaeological fieldwork was conducted by WSDOT Archaeologist Roger Kiers, who meets the Secretary of Interior Standards for Archaeology, with assistance from WSDOT Cultural Resources Specialist Erin Littauer. WSDOT Historian Craig Holstine conducted the built environment survey.

Sonicore

Deep excavation will be required for construction of the new bridge abutments. The valley floor in the project area is covered by thick Holocene alluvium and lahar deposits, and archaeological materials could potentially be buried at significant depths. Two sonic borings were drilled to test these deep deposits on both the north and south sides of the Puyallup River. The sonic drilling method used a rapidly oscillating drill head to advance an 8-inch diameter core barrel. The resulting core sample was extruded incrementally from the core barrel into plastic sleeves. Coring started at the surface and advanced in increments of 5 or 10 feet, reaching depths of 100 feet.

The cores were examined, described, and assessed for their potential to contain intact cultural resources. Cores were stored in wooden boxes and transported to the WSDOT Materials Laboratory for further analysis. Samples considered to have the potential to contain cultural materials were selected for screening through 1/4-inch mesh hardware cloth. Sonic boring was completed by Boart Longyear using a track-mounted sonic drill, and was inspected by the WSDOT Archaeologist.

Shovel probing

Shovel/auger probes were excavated within previously unsurveyed, or inadequately surveyed, portions of the APE considered to have potential for intact archaeological deposits. Probing focused on the northwest quadrant of the APE, north of Levee Road and west of Meridian, in the area of the proposed stormwater improvements. Shovel probes measured approximately 40-cm in diameter at the ground surface and, when possible, their depth was extended through the use of an 8-inch-diameter auger. All sediments were screened through 1/4-inch mesh hardware cloth. A portion of the

northernmost end of the APE was excluded from the survey based on indications from the project office that no work was planned in that area (Figure 2).

Subsequent to the shovel probing, two backhoe test pits were excavated by WSDOT for geotechnical purposes. Both were monitored by the WSDOT Archaeologist and visually inspected for evidence of buried cultural resources.

Affected Environment

Natural Setting

The project area is located in the Puyallup River valley within a geographic province known as the Puget Trough, a valley system that extends from the Puget Sound south through the Willamette Valley, and which separates the Olympic Mountains from the Western Cascades (Franklin and Dyrness 1973). The headwaters of the Puyallup River are on Mount Rainier, and the modern delta reaches west to Commencement Bay in Tacoma.

The Puget Sound Lowland generally lacks bedrock exposures due to a thick blanket of sediments removed and deposited with the advance and retreat of the continental ice sheets that played a major role in carving out the landscape. During the most recent glacial advance, the Puget Lobe of the Cordilleran Ice Sheet expanded southward from southwestern British Columbia into the Puget Lowland. As the advancing glacier blocked northward-flowing streams, valleys were dammed, causing the formation of proglacial lakes and depositing outwash beyond the advancing glacier, and eroding subglacial channels into the drift plain (Booth 1994). As the ice sheet began to retreat at the end of the Pleistocene, meltwater drained into the lowland, creating locally broad plains of recessional outwash, proglacial lakes, and eventually incursion of marine waters through the Strait of Juan de Fuca. The glacial troughs of the lower Puyallup River and Duwamish valleys became marine embayments.

For much of the Holocene, the lower Puyallup River valley below Sumner remained an embayment of Puget Sound. Mid- to late Holocene alluvial sand, silt, and gravel have filled the former embayment with significant sediment input from lahars originating on Mount Rainier (Palmer 1997). Prior to the Osceola Mudflow approximately 5,600 years ago, the ancient Puyallup River entered the former Puyallup Embayment near the present day City of Puyallup (Dragovich et al. 1994:15; Vallance and Scott 1997). The Osceola Mudflow, or lahar, originated on Mount Rainier and flowed down the White River drainage into the Green and Puyallup drainages, blanketing a 195 square mile area with as much as 100 feet of muddy sand, gravel, cobbles, and boulders (Dragovich et al. 1994:3). Dragovich and others (1994) have reconstructed the pre-Osceola topography of the Puyallup and Duwamish valleys using the base of the Osceola Mudflow interpreted from geotechnical borings and water well logs. The pre-Osceola Puyallup delta platform appears to be at an elevation of roughly -40 ft. (present) mean sea level (MSL) near the City of Puyallup. Since that time, the Puyallup River valley has infilled from delta progradation as mudflow deposits (and other Mount Rainier source materials, including

post-Osceola lahars) have been eroded and redesposited downstream, leaving deltaic and floodplain silts and sands overlying the Osceola deposit.

Mapped soils in the project area consist predominantly of Briscot loam in the northern portion of the APE, Pilchuck fine sand near the Puyallup River channel, and fill in the southern portion of the APE (Zulauf 1979). Briscot loam formed in alluvium under hardwoods and conifers. In a typical profile the surface layer is dark brown loam about 11 inches thick. The underlying material, to a depth of 29 inches is mottled, dark grayish brown fine sandy loam and silt loam; between depths of 29 and more than 60 inches, it is mottled, very dark grayish brown sand and gray silty clay loam. Pilchuck fine sand formed in mixed alluvium under hardwoods and conifers. In a typical profile the surface layer is very dark brown fine sand about 7 inches thick. The underlying material to a depth of 36 inches is very dark brown fine sand, and very dark brown very gravelly sand to a depth of 60 inches or more (Zulauf 1979).

Cultural Setting

Human occupation of the region followed the retreat of the glaciers during the terminal Pleistocene and occurred as early as 13,800 years ago at the Manis Site on the northern Olympic Peninsula, where evidence indicates that humans were hunting megafauna with bone projectile points (Waters et al. 2011). Following this earliest period of occupation, the precontact material culture of the area has been generally described as an early adaptation of inland technologies such as Fluted Point and Stemmed Point traditions of the interior and a subsequent assimilation, transition and development to later coastal-adapted technologies focused upon marine, littoral, riverine, and inland resources (Ames and Maschner 1999). The primary economic resource base was dominated by salmon and supplemented by marine fish, mammals, riverine resources, and vegetable foods (Suttles and Lane 1990). The regional adaptation to coastal and riverine resources allowed for the cultural evolution of the distinctive, though internally variable, Northwest Coast culture pattern of complex sedentary hunter-gatherers with intensive winter villages and extensive seasonal dispersal (Ames 1994; Ames and Maschner 1999).

The project area lies within the traditional territory of the Southern Coast Salish, which refers to speakers of two Coast Salish languages, Lushootseed and Twana, who lived on and around Puget Sound and its drainages (Suttles and Lane 1990:485). Southern Coast Salish bands shared many ethnographically-described practices in common with other coastal groups. Communities congregated at winter villages, which were the primary economic and social units. During the spring, summer, and fall, smaller groups of villagers dispersed across a wide territory to gather food, and to prepare surpluses for winter use.

Within the broader Southern Coast Salish designation, the Southern Lushootseed-speaking Puyallup are directly associated with the area surrounding the Puyallup River. Puyallup villages were typically located along creeks and rivers away from shores of Puget Sound (Smith 1940:9). Villages near the project area included *tsaqwéqwabc*, where Clarks Creek emptied into the Puyallup River, approximately 2.4 miles downstream of the project area, and *stáxabc* located where the Stuck River enters the Puyallup,

approximately 1.7 miles east of the project area (Smith 1940:10). Another village was located along Wapato Creek, *sq'wádabc*, to the northwest of the project area (Smith 1940:10). T. T. Waterman recorded other named places in the project vicinity, including *Sti'lagwats*, meaning "where wild strawberries grow," for the site of the town of Puyallup, and *SExuba'lt*^{u}, meaning "dance house," referring to certain religious performances held there, for the site of the town of Meeker (Waterman 2001:250). The town of Meeker was located due east of Puyallup, centered approximately 1.3 miles southeast of the current project.

Epidemic disease, economic stress, and social disruption among the Southern Coast Salish followed the first contact and interaction with Europeans in the late 18th century (Boyd 1990; Cole and Darling 1990). With the establishment of Washington Territory in 1853 and increasing numbers of white settlers, the federal government soon desired to negotiate treaties with the Indians in the territory in order to persuade them to transfer their lands and move onto reservations. The signing of the Treaty of Medicine Creek in 1854 created the Puyallup, Nisqually and Squaxin Reservations.

The first Euroamerican settlers came to the Puyallup vicinity by wagon train, crossing over the Cascades on the Naches Pass Trail, in October of 1853. Among the early settlers in the Puyallup vicinity was John Carson, who claimed property on the north bank of the Puyallup River including land within the current project APE. Carson's 316 acres were bisected by a crude road, and Carson operated a ferry across the Puyallup River near today's Meridian Street Bridge (Bonney 1927). During Indian uprisings in 1855, Carson's family and other local settlers fled to Fort Steilacoom. A military blockhouse known as Fort Maloney was constructed in 1856 on the south bank of the Puyallup River to guard the ferry crossing. After the settling of the Indian War in 1856, Carson and his neighbors slowly returned the Puyallup area and resumed development. Fort Maloney was occupied by the Carson family upon their return, becoming known as Fort Carson. Mrs. Carson taught school there in 1861 (Bonney 1926), and a post office was established there in 1862 (Price and Anderson 2002:26). Today, a lone chestnut tree stands on the former Carson claim near a SR 167 entry ramp, just outside the project APE, reportedly the sole remnant of an orchard planted by John Carson as early as the 1850s (Luttrell 2004).

Carson's ferry eventually became inoperative, and he constructed a wooden toll bridge across the river in 1858 (Bonney 1926). By that time, the road past Carson's place and over his bridge had become a military road connecting Steilacoom and Bellingham, and the state's first telegraph line was strung over this road (ibid.). The bridge was washed out by flooding during the winter of 1862-1863, but Carson continued to operate a ferry at the crossing.

Another early settler to the area, James P. Stewart, claimed property near the Carson claim on the opposite (south) bank of the Puyallup River in 1859. In 1862, J. P. Stewart donated land for a school building that replaced Fort Carson (Price and Anderson 2002:28). Settlers who followed included John Meeker, the brother of Ezra Meeker, who arrived with his family in 1859 and claimed property adjoining the Stewart homestead.

Several years later in 1862, Ezra Meeker, who is credited as being the founder of Puyallup, joined his brother in the valley. Meeker and others went on to prosper during the hop boom of the 1880s.

Historically, the Puyallup area has been subject to extensive flooding. During one particular flood event, Stewart spent a perilous night in the riverbank schoolhouse and had to be rescued by Carson the next morning (Price and Anderson 2002:44). Stewart later approached Carson about digging a ditch across the Carson place in order to connect the river above and below the huge meander that was eroding into Stewart's property. In 1883, a Chinese contractor brought 25 laborers to dig a new channel by hand, eliminating the meander directly upstream of today's Meridian Street Bridge (Figure 3).

During a destructive flood in 1906, a massive jam formed in the lower White River causing the backflow to spill into the Stuck River, and adding another flooding river system to the already flooding Puyallup. With the White River now flowing south and the Puyallup River even more susceptible to destructive flooding, Puyallup city officials persuaded the Washington State Legislature to pass an appropriation to help straighten the Puyallup River in 1909. Significant efforts to build levees and widen, straighten, and deepen the Puyallup River between Tacoma and Puyallup began soon thereafter, including elimination of the meander directly downstream of the current project area (Figures 3 and 4) (Roberts 1920). By 1914, the river was dredged and channeled and a concrete levee was constructed from the harbor to the City of Puyallup (City of Tacoma 1981). Continued flooding eventually led to the construction of the Mud Mountain Dam on the White River, completed in 1953, for additional flood control.

In November 1924, Pierce County applied for federal aid to build a steel highway bridge across the Puyallup River, and in early February 1925 awarded a construction contract for $77,200 to the Puget Sound Bridge & Dredging Company of Seattle. In announcing the award, the Puyallup Valley Tribune noted that "The new road [Meridian Street] will considerably shorten, by the northern route, the distance to Tacoma, and will also bring the big [Puyallup Indian] Reservation district a mile closer to Puyallup (2/7/1925:1)." The bridge was finished in time for the opening of the Western Washington State Fair on 21 September 1925, but Meridian Street remained unpaved, due to refusal by the City Council to fund improvements (9/19/1925:1). Finally County Commissioner Henry Ball had the street "put in shape" for Fair traffic, despite the Council's recalcitrance (9/26/1925:1). The bridge originally carried a lane of traffic in each direction until 1971 when a concrete bridge was built immediately adjacent to the west truss to carry southbound traffic.

During the 1925 construction of the Meridian Street Bridge, the Washington State Historical Society installed a four-sided pyramidal cobblestone marker with concrete base near the northeast end of the bridge. Four incised granite slabs on the marker commemorate the 1855 warning from Abraham Salatat of the impending Indian war, the 1856 erection of Fort Maloney, the school taught by Mrs. Carson in the former blockhouse, John Carson's toll bridge, the river crossing of the military road from

Figure 3. Project area overlaid on historic maps, showing cultural features and changes to the river channel, including General Land Office plat (USSG 1864), 1890 City of Puyallup map (in Price and Anderson 2002), Kielland's (1907) map of the Duwamish-Puyallup Valley, and Kroll's Pierce County Atlas (Kroll Map Company 1915).

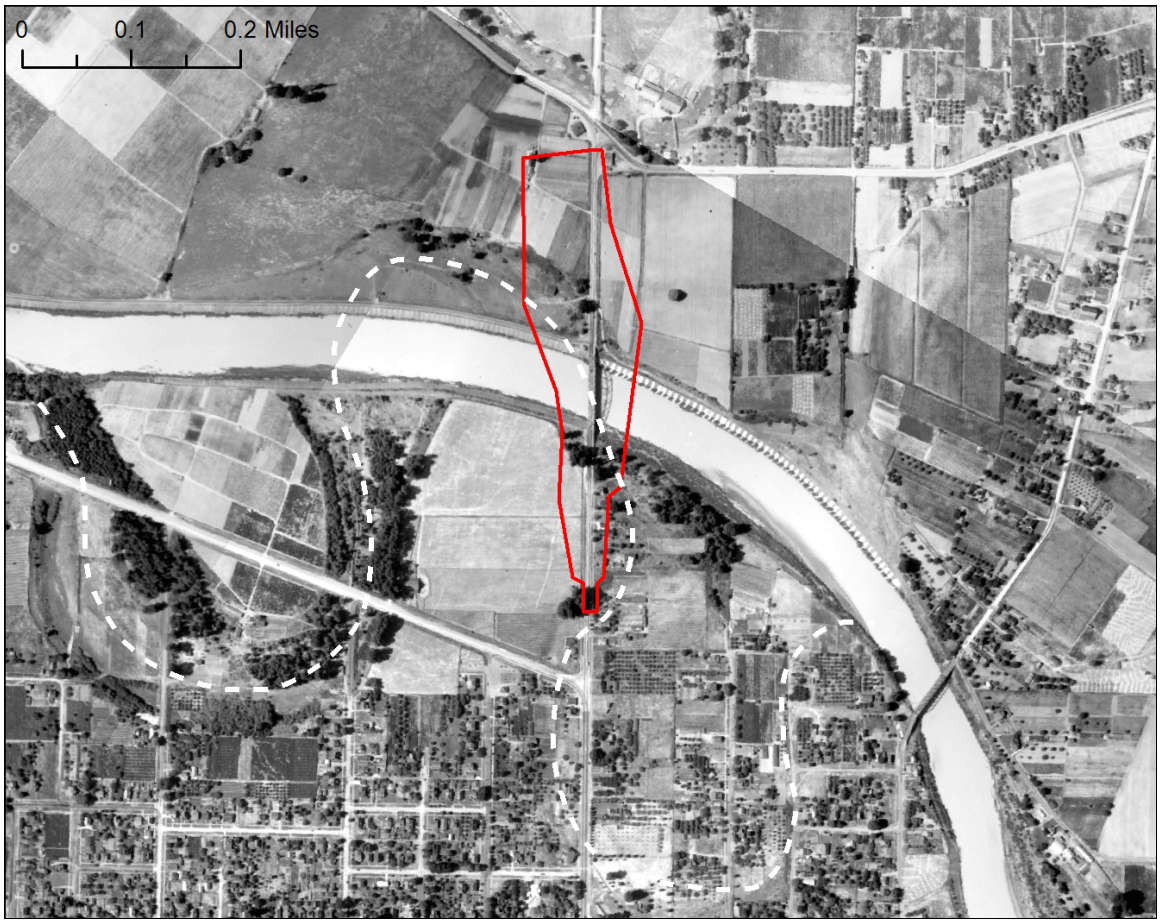

Figure 4. Project area overlaid on 1940 U.S. Army Corps of Engineers Aerial Photograph. Dashed line added to show former river meanders prior to channel straightening in the late 19th and early 20th centuries.

Steilacoom to Bellingham, and the first telegraph wire. The marker was moved roughly 220 feet west to its current location on Levee Road by WSDOT during the Meridian St. No. to Sumner No. C/L Project, which was completed in 1973.

Commercial development of former agricultural fields around the south end of the APE began in the 1960s. In 1963, the Hi Ho Shopping Center opened up southwest of the Meridian Bridge at the location of today's Fred Meyer store. Other business joined the shopping complex, and in 1966 the shopping center owners sponsored the construction of the underpass beneath the south end of the Meridian Bridge, which carries northbound shoppers to the area (Price and Anderson 2002:121). Tiffany's Skate Inn, southeast of the bridge, opened in 1969. The Fred Meyer Corporation purchased the Hi Ho Shopping Center in 1980, and eventually tore down the complex to build a new store.

Previous Cultural Resources Surveys

This report supplements the archaeological survey investigations previously completed for the SR 167 Extension Project over a four-year period between 2000 and 2004 by Archaeological and Historical Services (AHS), as summarized in their 2004 report

(Luttrell 2004). The APE for the SR 167 corridor surveyed by AHS was offset 200 ft. from centerline for direct effects, and 400 ft. for indirect effects (Figure 2). The vertical APE was 3 feet. The entire APE was subject to pedestrian survey; probing was conducted in high probability areas where right-of-entry was acquired, at 20-30 meter intervals, using either a shovel or mechanical auger.

At the south end of the SR 167 project area near Puyallup, AHS was unable to excavate shovel probes in one high potential area due to heavy vegetation and the fact that it was continuously occupied as a homeless camp for approximately 50 years. This area, described as a bench on the north bank of an abandoned meander channel of the Puyallup River, is in the vicinity of the northwest portion of the current project APE. Instead of shovel probes, AHS excavated a backhoe trench measuring ca. 265 m (870 ft.) long and 61 cm (2 ft.) wide to an approximate depth of 0.9 m (3 ft.). Two AHS archaeologists monitored the excavation of the trench and inspected, profiled, and photographed the sidewalls.

No maps of probe or trench locations are provided in the AHS survey report. Based on shovel probe records obtained from AHS, probes extended over a length of 700 meters starting at the west end of WSDOT parcel 0420214040. Based on those records, the east end of the line of probes would have extended to within approximately 250 meters of the current APE's western edge, which is at the edge of a wooded area that probably coincides with the former homeless camp. Assuming the east-west trench began near the terminus of the shovel probe line, the 870-foot-long trench would have extended into the current project APE by at least 100 feet (Figure 2). The records suggest that no AHS excavations occurred within the current project APE outside of the backhoe trench.

The current scope of archaeological survey was intended to supplement the previous work by AHS. The AHS survey acknowledged that the project area had potential for deeply buried archaeological resources but, because they were considered beyond the limits of standard testing methodology, no attempts were made to identify deeply buried sites below a depth of three feet. The AHS survey did not extend to the south side of the Puyallup River.

Subsequent to the AHS survey, two cultural resources surveys were completed along the City of Puyallup's Riverfront Trail, within a mile upstream and downstream of the Meridian Street Bridge (Shong 2003a, 2003b). The Riverfront Trail is a multi-use trail on top of, and adjacent to, the flood-control levee along the south side of the Puyallup River. No cultural resources were recorded during the survey for the upstream or downstream portions of the trail, although evidence of the historic levee is discussed, as are a series of wooden pilings within the Puyallup River. The segment of Puyallup River levee within the trail project area was described but not inventoried. According to Shong (2003b), the levee currently exists as a rip-rapped river margin, and multi-terraced landscape. A small segment of the levee exists as a two-sided earthen feature with rock and concrete rip-rap on the river side, but much of the non-river side of the project area had been filled to the levee grade obscuring all signs of the original form. The segment of levee within the trail project area did not retain its original form or design that would distinguish it as a typical

levee. Segments further downstream (and outside the trail project APE) were said to better define the original form, design and construction techniques used to build the levee, including concrete surfaces, and two-sided construction.

The City of Puyallup undertook a reconnaissance-level survey of historic buildings in its downtown in 2007, resulting in a context statement about the development of Puyallup, general observations, recommendations, and Washington State Historic Property Inventory forms for 96 properties dating from 1888 to 1964 (BOLA 2007). In 2009, the City identified the residential neighborhood northwest of downtown for additional survey at the reconnaissance level, recording a total of 33 properties dating largely from 1900 to the 1920s (BOLA 2010). Both the downtown and northwest neighborhoods are outside and south of the current project APE.

No archaeological sites have been previously recorded within one mile of the Meridian Street Bridge project area.

Expectations

The project area has a dynamic history of natural processes and cultural uses and modifications that influence the types and locations of cultural resources that can be expected within the APE. The APE has evolved from a late Pleistocene glacial trough, to an early Holocene marine embayment, to mid-Holocene delta front, to late Holocene meandering river floodplain and channel. The mid-Holocene Osceola Mudflow dramatically influenced sedimentation in the valley, and is recognized in the subsurface of the project area as a poorly sorted, deposit of gravel- to boulder-size clasts in a silty, sandy matrix, tens of feet thick. Subsequent fluvial reworking of these and later deposits has left secondary deposits of Mount Rainier source materials overlying the Osceola deposit. The formerly meandering Puyallup River channel has been straightened, leaving remnant channels and fills in the APE.

Native Americans have utilized the Puyallup River and its floodplain for thousands of years. If intact, buried surfaces remain in the APE, they could potentially contain evidence of Native use and occupation. Given the significant amount of sedimentation that has occurred in the valley, particularly since the mid-Holocene, such archaeological evidence could be deeply buried. Due to the proximity of much of the project area to the active river channel and recent land alterations, however, the probability of preservation of intact archaeology may be somewhat reduced, with higher potential further out on the floodplain. Similarly, although the APE has experienced multiple historic uses since the mid-1800s, expectations for intact historic archaeology are tempered by historic and modern developments that have altered the landscape, including channel improvements and thick fills under Meridian Street and the bridge approaches.

Results of Fieldwork

The two sonic boreholes were drilled between March 27 and March 29, 2012 under cloudy skies, with rain on the 29th. Shovel/auger probing was completed on April 24, 2012 under overcast but dry skies. Monitoring of geotechnical trenching was done on May 7, 2012.

Sonic Borings

Sonic bore #1 (SB-1) was drilled on the north bank of the Puyallup River, on the north shoulder of the SR 167 underpass to N. Levee Road, directly west of the Meridian Street Bridge (Figures 2 and 5). SB-2 was drilled on the south side of the Puyallup River, west of Meridian Street, on the grassy lawn between Meridian Street and the underpass that carries northbound traffic to and from the Fred Meyer shopping complex (Figures 2 and 6).

Both boreholes generally encountered a similar depositional sequence. Lithologic units encountered in each borehole are represented in Figure 7. Depths were measured in the field from the ground surface. In order to more easily compare data between sonic boreholes, elevations of lithologic units have been adjusted to relative mean sea level (msl) as measured from the ground surface elevation extrapolated from the LiDAR Digital Elevation Model (DEM). SB-1 was drilled from an approximate surface elevation of 35 feet msl; SB-2 was drilled from an approximate elevation of 44 feet msl.

The lithology of sediments encountered in the boreholes is designated in Figure 7 by a capital letter indicating the dominant grain size of the deposit. This capital letter is typically followed to its right by a lowercase letter describing a secondary property of the

Figure 5. View of sonic bore #1, looking southeast towards the Puyallup River bridges.

Figure 6. View of sonic bore #2 from the bridge, looking southwest towards Fred Meyer.

same deposit. For example, a primarily sandy deposit would be identified by a capital "S." A silty sand deposit would be designated "Sz." Other modifiers can be added indefinitely. The exception to this sequence are the prefixes used to describe sand grainsize classes (very fine to coarse), which are placed to the left of the sand identifier. The lithologic units defined in this way represent single depositional events that occurred under specific conditions in a particular setting. These units can then be grouped together into more inclusive strata, which represent various types of depositional events that occur together in the same overall depositional environment.

Both sonic boreholes were drilled to depths of 100 feet below ground surface, although the bottom nine feet of SB-2 fell out of the core and could not be recovered. Sediments are described below as encountered from bottom to top. At the greatest depths, fine- to coarse-grained sand was recovered (from SB-1), at an elevation of -65 to -50 feet (Figure 7). These sands were overlain by several feet of gray silt and fine sand containing a few fibrous organics and wood fragments and, in SB-2, also by dark gray medium to coarse sand and sandy rounded gravel. These sediments are interpreted as fluvial and deltaic silts and sands deposited at a time when the Puyallup River delta was near the City of Puyallup in the vicinity of the project area. This is consistent with other estimates of the elevation of the delta platform that existed in the area prior to deposition of the Osceola Mudflow (Dragovich et al. 1994; Palmer 1997).

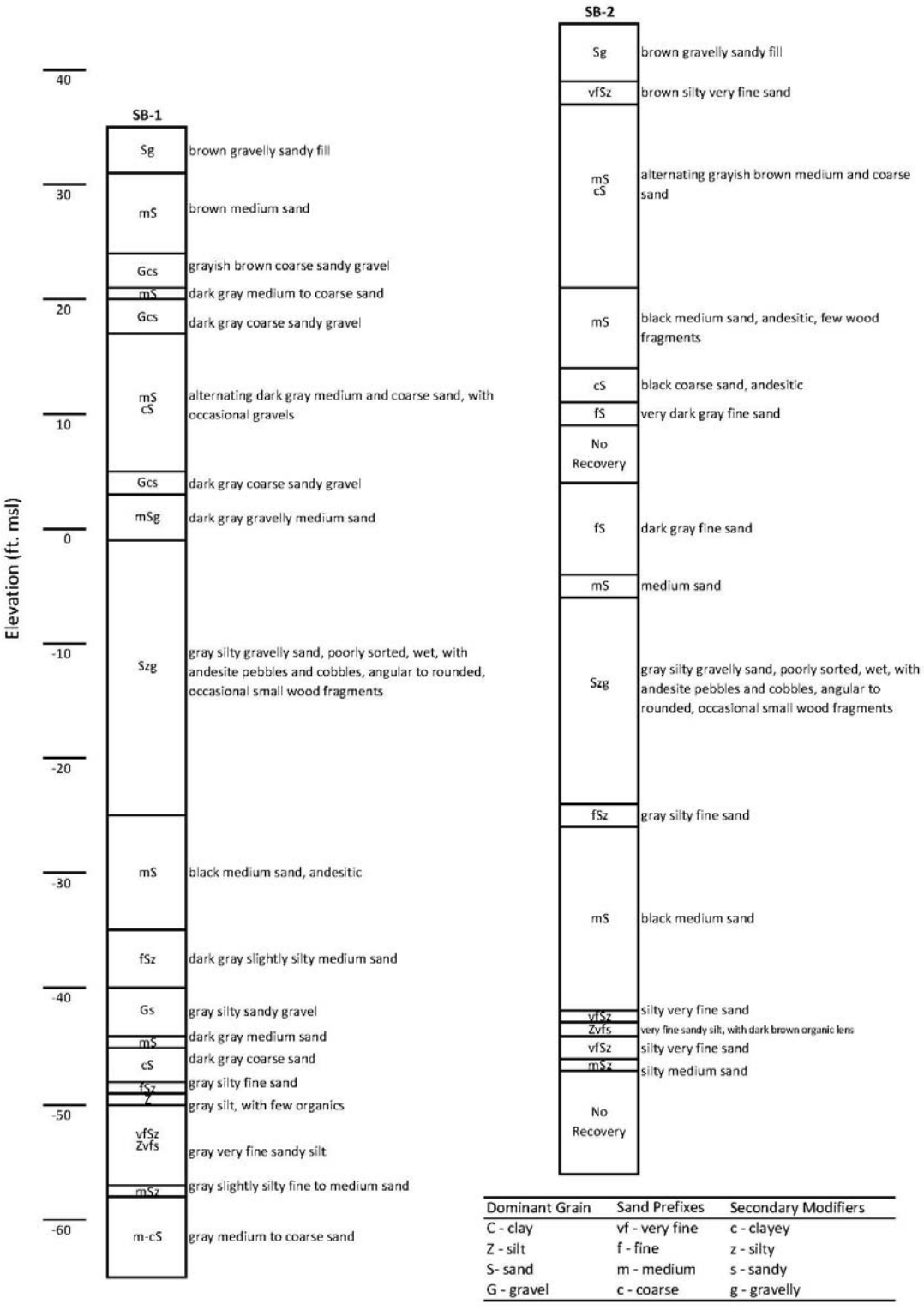

Figure 7. Sonic borehole logs.

A poorly sorted silty, sandy gravel deposit was found at a depth of -44 to -40 ft. in SB-1, but was absent from SB-2. This gravelly deposit resembles, but is clearly separate from, the later Osceola lahar deposit, and may represent a pre-Osceola lahar from the Cowlitz Park eruptive episode on Mount Rainier (Pringle 2008:35).

Figure 8. Osceola debris flow deposit in SB-1, at approximately -23 ft. msl.

Between elevations of -40 and -25 feet, a massive deposit of very dark gray to black, andesitic medium sand was encountered. The andesitic composition of the sand indicates an origin on the flanks of Mount Rainier, and it may represent a transition facies deposit left by the dilute flow front of the Osceola Mudflow (Scott 1988), or fluvial redeposition of earlier lahar sands. At an approximate bottom elevation of -25 feet, both boreholes encountered a thick deposit of poorly sorted, wet, gray muddy sand with gravels and cobbles (Figure 8). Gravels were angular to well-rounded, and were mostly andesite. A few small wood fragments were encountered as well. This deposit, interpreted as the debris flow from the Osceola lahar event, was approximately 18- to 24-feet thick in the two boreholes. Above the Osceola Mudflow in SB-1, deposits consisted of dark gray, alternating fine to coarse andesitic sands and fine gravels, representing fluvial sands and gravels deposited in and near the former river channel prior to realignment. In SB-2, gravels are largely absent above the mudflow deposit, with sediments consisting of fine to coarse fluvial sands. The andesitic composition of the sands in both boreholes indicates their origin in upstream Osceola deposits or reworking of other volcanic sources that originated on the flanks of Mount Rainier. A deposit of black volcaniclastic sand in SB-2 between 11 and 21 ft. msl may represent a late-Holocene lahar event. The uppermost deposits in both boreholes, above 21 ft. msl, are browner in color, and in SB-1 consist of medium sands likely deposited within the abandoned channel after river straightening roughly 100 years ago, either naturally during flood events, or as intentional fill during the realignment. The top five feet of both boreholes encountered more recent gravelly sandy fill likely deposited during road and bridge construction.

No evidence was observed of buried, stable surfaces likely to have preserved evidence of past human occupation.

A number of borehole logs generated for the project by the WSDOT Geotechnical Division were also examined. Two geotechnical boreholes had been drilled in close proximity to the two sonic boreholes: geotechnical borehole H-5p-11 was drilled near SB-1, and H-3p-11 was drilled near SB-2. The H-5p-11 core reached 251 feet below ground surface, and H-3p-11 reached 236 feet below surface.

Dense sands and gravels encountered below 130-140 feet below surface in both boreholes may represent Pleistocene outwash deposits, overlain by silty deposits possibly representing incursion of the Puyallup Embayment, followed by sands and silts representing arrival of the Puyallup delta. The poorly-sorted Osceola Mudflow deposits are found between depths of approximately 70 and 40 feet. These are overlain by post-Osceola alluvial sands.

Shovel/Auger Probing

A total of nine shovel/auger probes were completed in the northwest portion of the APE, reaching depths ranging from 40 to 220 cm below ground surface (Table 1). Soils ranged from silt loam to sandy loam soils that have developed within floodplain alluvium, resembling the Briscot loam mapped in the area, with thin layers of fill encountered at the surface of several of the probes. No cultural materials or evidence of intact buried surfaces were identified.

Table 1. Shovel/Auger Probe Descriptions.

Shovel Probe #	Sediments	Interpretation
1	**0-25 cm**: 10YR 3/2 very dark grayish brown silt loam, w/ 10% angular to rounded gravel including a few larger cobbles; **25-55 cm**: 10YR 4/2 dark grayish brown clayey silt, very dense	Fill above floodplain silts or fill compacted by roadway construction
2	**0-40 cm**: 10YR 3/2 very dark grayish brown loam transitioning to silty fine sand; **40-200 cm**: 7.5YR 3/4 dark brown fine sand, becomes 10YR 4/2 dark grayish brown fine sand	Soil developed in floodplain alluvium
3	**0-20 cm**: 10YR 3/2 very dark grayish brown silt loam; **20-60 cm**: 10YR 4/2 dark grayish brown silt loam; **60-105 cm**: 10YR 3/2 very dark grayish brown fine sand	Soil developed in floodplain alluvium
4	**0-25 cm**: 10YR 3/2 very dark grayish brown silt loam, w/ 10% angular to rounded gravel including a few larger cobbles; **25-55 cm**: 10YR 4/2 dark grayish brown clayey silt, very dense	Fill above floodplain silts or fill compacted by roadway construction
5	**0-20 cm**: 10YR 3/2 very dark grayish brown loam; **20-75 cm**: 10YR 4/3 brown fine sandy loam; **75-170 cm**: 7.5YR 3/4 to 10YR 3/1 dark brown to very dark gray fine sand	Soil developed in floodplain alluvium
6	**0-20 cm**: 10YR 3/2 very dark grayish brown loam; **20-90 cm**: 10YR 4/3 brown fine sandy loam; **90-200 cm**: 7.5YR 3/4 to 10YR 3/1 dark brown to very dark gray fine sand; **200-212 cm**: 10YR 4/3 brown silty very fine sand	Soil developed in floodplain alluvium
7	**0-20 cm**: 10YR 3/2 loam, with 10% rounded to angular gravel; **20-105 cm**: 10YR 4/3 brown fine sandy loam, dense	Fill above soil developed in floodplain alluvium
8	**0-35 cm**: 10YR 2/2 very dark brown gravelly loam; **35-80 cm**: 10YR 4/2 dark grayish brown fine sandy loam becoming fine sand; **80-220 cm**: 10YR 3/1 very dark gray fine to medium sand	Fill above soil developed in floodplain alluvium
9	**0-25 cm**: 10YR 3/2 very dark grayish brown silt loam, w/ 10% angular to rounded gravel including a few larger cobbles; **25-40 cm**: 10YR 4/2 dark grayish brown clayey silt, very dense	Fill above floodplain silts or fill compacted by roadway construction

Geotechnical Trenches

Two geotechnical test pits were excavated by backhoe on May 7, 2012 in the northwest portion of the APE near the previously-excavated shovel probes (Figure 2). Test pit #1, which was visually determined to be within an area of fill extending west from the

highway, encountered silt, sand, and gravel fill. The trench terminated on a broken slab of concrete at a depth of five feet. Test pit #2 was excavated to a depth of nine feet, and encountered loam soils that have developed within sandy floodplain alluvium. No cultural materials or evidence of intact buried surface were identified.

Historic Structures Survey

WSDOT Historian Craig Holstine reevaluated the Puyallup River/Meridian Street Bridge in December 2011, and surveyed the additional historic structures (dating 45 years or older) within the APE on June 8, 2012 (see Figure 2 for locations).

Puyallup River/Meridian Street Bridge

The 1925 Puyallup River/Meridian Street Bridge's main span is a 371-foot long steel riveted, subdivided Warren through truss (Figure 9). Unlike the standard Warren truss, this bridge has parabolic top chords and alternating diagonal truss members, longitudinal braces between diagonals in alternating panels, and vertical members adjacent to the portals. In 1991 the portal sway braces and interior panel sway bracing was modified to increase vertical clearance for over-sized traffic from 14 feet 7 inches to 18 feet 7 inches. Although the modifications were sensitive to the original truss configuration, retaining as much of the old bracing as possible, the truss appearance has changed somewhat when viewed from the roadway. Among the changes to the deck are the 21 inch-high metal thrie beams attached to the traffic-facing side of the trusses, reducing the roadway width by 9 inches to 21 feet. The south approach to the truss consists of a 21-foot long precast, prestressed girder span and two 19-foot long timber trestle spans (which replaced earlier timber spans), all added in 1951. The north approach consists of two 19-foot long timber trestle spans, also dating to 1951, bringing the total length of the structure to 468 feet. The truss piers are founded on timber piles, while the approach piers rest on concrete spread footings. A five-foot wide timber sidewalk is attached to the east side of the bridge. A decorative, cross-hatched lattice steel rail is attached to the outer edge of the sidewalk along the full length of the truss span, providing both improved safety for pedestrians and a somewhat aesthetic appearance to the east elevation. The bridge originally carried a lane of traffic in each direction until 1971 when a concrete bridge was built immediately adjacent to the west truss to carry southbound traffic. The modern concrete bridge rises several feet above the roadway of the historic truss bridge, detracting considerably from the aesthetics of the older bridge.

Figure 9. Meridian Street Bridge.

Fort Maloney Historical Marker

The Fort Maloney Historical Marker (Figure 10), dedicated in 1925, commemorates several important historical events that occurred in the vicinity of the Meridian Street Bridge, as described in the Cultural Setting section of this report. The

mortared cobblestone pyramid on a concrete base was moved from the Meridian Street Bridge's northern approach to its current location on N. Levee Road in the early 1970s.

Figure 10. Fort Maloney Historical Marker, looking southeast, with SR 167 bridges in background.

North Bank Puyallup River Revetment
A revetment consisting of boulders up to two feet in diameter stacked at an angle greater than 45 degrees armors the north bank of the Puyallup River under the SR 167 bridges (Figure 11). The revetment rises approximately 8 feet above an inclined base of similar sized boulders that extends into the river. Unconsolidated boulders, rocks, and gravels have been dumped atop the revetment to add protection to the roadway loop under the bridges connecting northbound SR 167 traffic with North Levee Road. Extending beyond the bridges in both directions for undetermined distances, the revetment has been built up around the piers of both the 1925-built and 1971-built bridges, suggesting its installation being cotemporaneous with, or after, the latter bridge's construction date. This rock revetment is therefore the most recent iteration of Puyallup River flood control efforts that date back to the late 1800s. No similar rock revetment exists on the south bank of the river under the bridges, although revetments and levees exist beyond the SR 167 right-of-way both upstream and downstream.

Figure 11. North Bank Revetment.

Paul A. Lindsay House
Pierce County Assessor-Treasurer's information shows this house's construction date as 1955. However, given the house's style and construction, it seems likely it was built earlier. The City Directory indicates that Paul A. Lindsay, a janitor at Maplewood School, and his wife Adolphine lived at this address in 1947. By 1950 Lindsay had become a teacher at the school. Despite his probable salary increase, it seems unlikely that the

Figure 12. Paul A. Lindsay House.

Lindsays would have built a new house here five years later. They continued living in the house at least through 1961.

Mead M. Murray House
This vernacular two-story house facing N. Meridian Street is largely screened from view by maple, oak, birch and other large trees and shrubs that have overgrown the property. In 1936 Mead M. and Wilma Murray lived in this house, which at that time was 103 N. Meridian (three years later it was 1003 N. Meridian, and by 1947 the address had become 1103 N. Meridian). The Murrays continued to live there at least through 1958. By 1961 Glen M. and Jean B. Freeman lived in the house. Pierce County records say the house was built in 1900. That date appears to be too early, given the style and materials used in the house's construction (especially the drop siding), and the probable age of N. Meridian Street. The roadway may not have existed in its present alignment until shortly before the Puyallup River Bridge was built in 1925. At the time of the bridge's construction, N. Meridian was an unimproved, unpaved roadway. It took action by a county commissioner and the approaching opening of the Western Washington Fair of 1925 to finally improve the street.


Figure 13. Mead M. Murray House.

Table 2. Inventoried Historic Properties.

Property # (see Fig. 2)	Property Name	Construction Date	NRHP Status
1	Meridian Street Bridge	1925	Eligible
2	Fort Maloney Historical Marker	1925	Not eligible
3	North Bank Puyallup River Revetment	ca. 1971	Not eligible
4	Paul A. Lindsay House	ca. 1940	Not eligible
5	Mead M. Murray House	ca. 1920	Not eligible

Assessments of Significance

Meridian Street Bridge
As part of the SR 167 Extension – Puyallup to SR 509 Project documentation completed in 2000, the existing Meridian Street Bridge was determined not eligible for listing in the National Register of Historic Places (NRHP). Reevaluation of the bridge for the current phase of the project yielded additional information on the unique nature of its design. The Puyallup River/Meridian Street Bridge is currently the longest, simply supported, steel riveted Warren through truss span built prior to 1940 remaining on the Washington State highway system. The popularity of the Warren truss emerged in the late 1930s, and continued through the 1950s. Very few truss bridges were built on State-owned highways

after 1960. Although a modest number of Warren trusses still remain on the system, the number has declined. Narrow bridges with restricted vertical clearance, such as through trusses, are routinely replaced by wider concrete bridges.

The Puyallup River/Meridian Street is also significant for its unusual, perhaps unique truss configuration. As a variation from the standard Warren truss' horizontal top chord, the bridge has a parabolic top chord allowing for a longer span length than possible with the standard top chord. The parabolic configuration also avoided the need for heavier, or additional, truss components to reach the entire span length. Its subdivided panels and the addition of longitudinal members at the mid-panel heights in five truss panels achieved both strength and economy of steel. The bridge is significant for its design, which is the only one of its kind in Washington, and may very well be unique in the United States if not the world, although additional research would be needed to confirm that conclusion. Despite modest alterations over the years, and additions made for safety and structural improvement, the bridge retains integrity of design, materials and workmanship, and is thus eligible for inclusion in the NRHP under Criterion C. The SHPO concurred with WSDOT's determination of eligibility on February 8, 2012.

Fort Maloney Historical Marker

The historical marker was previously evaluated in 2000 by Charles Luttrell, who recommended the structure not be determined eligible because "its design, age, tradition or symbolic value has not invested it with its own significance." WSDOT determined the marker not NRHP eligible in 2003, and the SHPO concurred. Since the monument does not appear to possess aesthetic values of the period of its creation; nor has it defined the historic identity of the area; nor has it come to symbolize the values, ideas, or contributions valued by the generation that erected it, the marker is not eligible for inclusion in the NRHP per the requirements of Criteria Consideration F: Commemorative Properties. The marker will not be touched by the proposed project.

North Bank Puyallup River Revetment

With the 1909 passage by the Washington State Legislature of an appropriation to help straighten the Puyallup River, significant efforts to build levees and widen, straighten, and deepen the Puyallup River between Tacoma and Puyallup began in earnest, including elimination of the meander directly downstream of the current project area. By 1914, the river was dredged and channeled and a concrete levee was constructed from the harbor to the City of Puyallup (City of Tacoma 1981). Undated photos show the 1925-built bridge atop massive concrete levees on both banks of the river (Dorpat and McCoy 1998:264). Those levees do not presently exist under the two SR 167 bridges. The levee on the south bank is still in place a short distance downstream of the APE and, although not visible, may still be in place upstream and downstream from the APE on the north bank. In 1950 the US Army Corps of Engineers rebuilt revetments and levees when the river's channel capacity was increased, and some of that work may have involved the structures under the bridges.

The current north bank revetment appears to be of more recent construction, with rocks probably larger than early trucks and construction equipment could have easily moved

into place. A 1971 "Plan" drawing for the new SR 167 bridge shows "concrete slope protection" on the river's north bank, indicating that the present rock revetment dates to the 1971 bridge construction or sometime thereafter when the earlier flood control structure was either removed or covered by a new structure. Thus the original revetment or levee in this location has lost integrity of materials, workmanship, and feeling (if not design), and is not NRHP eligible.

Lindsay House

Although the house retains much of its exterior integrity, it lacks architectural distinction and is not eligible for inclusion in the National Register of Historic Places. Installation of vinyl windows has compromised that integrity, most prominently on the structure's primary façade.

Murray House

This abandoned, vernacular house retains considerable integrity of design and materials on its exterior, most notably its cladding, wood windows, and wood rain gutters. Despite the house's retention of some historic appearance, however, its deteriorated condition and lack of architectural distinction render it ineligible for inclusion in the National Register of Historic Places.

Conclusions and Recommendations

This supplemental survey for the Meridian Street Bridge phase of the SR 167 Extension Project resulted in the inventory and/or reevaluation of five historic structures, one of which (the Meridian Street Bridge) is eligible for listing in the NRHP. WSDOT and FHWA will continue consultation with interested parties in order to seek ways to avoid, minimize, or mitigate adverse effects to the Meridian Street Bridge that could result from the project. If adverse effects to the Meridian Street Bridge cannot be avoided, an amendment to the existing Memorandum of Agreement (MOA) for the SR 167 Extension Project should be developed in consultation to stipulate mitigation measures.

The MOA should also stipulate additional Section 106 review of future phases of the SR 167 Extension Project in order to ensure that historic properties outside the Meridian Street Bridge project area have been adequately taken into account.

Notes and photographs for this survey will be kept on file at the WSDOT Environmental Services Office, Olympia, Washington. A copy of this report should be forwarded to the Washington State Department of Archaeology and Historic Preservation, and the interested and affected tribes.

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Appendix A – Historic Property Inventory Forms

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION
Protect the Past, Shape the Future

Historic Inventory Report

Location

Field Site No.

DAHP No.

Historic Name: Meridian Street Bridge

Common Name: Puyallup River Bridge 167/20E

Property Address: 0000 N Meridian St N, Puyallup, WA 98424

Comments:

Tax No./Parcel No.

Plat/Block/Lot

Acreage

Supplemental Map(s)

Township/Range/EW	Section	1/4 Sec	1/4 1/4 Sec	County	Quadrangle
T20R04E	21			Pierce	PUYALLUP

Coordinate Reference

Easting: 1194635

Northing: 686851

Projection: Washington State Plane South

Datum: HARN (feet)

Identification

Survey Name: Puyallup River Bridge

Date Recorded: 12/30/2011

Field Recorder: Craig Holstine

Owner's Name: Washington State Department of Transportation

Owner Address: 310 Maple Park Blvd.

City: Olympia State: WA Zip: 98504

Classification: Structure

Resource Status: Survey/Inventory

Comments:

Within a District? No

Contributing? No

National Register:

Local District:

National Register District/Thematic Nomination Name:

Eligibility Status: Not Determined - SHPO

Determination Date: 1/1/0001

Determination Comments:

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION
Protect the Past, Shape the Future

Historic Inventory Report

Description

Historic Use: Transportation - Road-Related (vehicular)
Current Use: Transportation - Road-Related (vehicular)
Plan: Unknown
Stories: not applic
Structural System: Steel
Changes to Plan: Slight
Changes to Interior: Not Applicable
Changes to Original Cladding: Not Applicable
Changes to Windows: Not Applicable
Changes to Other: Not Applicable
Other (specify):

Style:	Cladding:	Roof Type:	Roof Material:
Other	None	None	None

Foundation:	Form/Type:
Concrete - Poured	Other

Narrative

Study Unit
Transportation

Other

Date of Construction:
1925 Built Date
1951 Remodel

Builder: Puget Sound Bridge & Dredging Co., Seattle
Engineer: M.M. Caldwell
Architect:

Property appears to meet criteria for the National Register of Historic Places: Yes
Property is located in a potential historic district (National and/or local): No
Property potentially contributes to a historic district (National and/or local): No

Statement of Significance: The Puyallup River/Meridian Street Bridge is currently the longest, simply supported, steel riveted Warren through truss span built prior to 1940 remaining on the Washington State highway system. The popularity of the Warren truss emerged in the late 1930s, and continued through the 1950s. Very few truss bridges were built on State-owned highways after 1960. Although a modest number of Warren trusses still remain on the system, the number has declined. Narrow bridges with restricted vertical clearance, such as through trusses, are routinely replaced by wider concrete bridges.

The Puyallup River/Meridian Street is also significant for its unusual, perhaps unique truss configuration. As a variation from the standard Warren truss' horizontal top chord, the bridge has a parabolic top chord allowing for a longer span length than possible with the standard top chord. The parabolic configuration also avoided the need for heavier, or additional, truss components to reach the entire span length. Its subdivided panels and the addition of longitudinal members at the mid-panel heights in five truss panels achieved both strength and economy of steel. Those highly unusual modifications to the original Warren truss appear strikingly similar to the so-called Turner truss, patented by Claude A.P. Turner in 1923. Turner wrote that "The type of truss is one originated by the writer to eliminate the multiplicity of nominal members" (Turner 1922:180). In his patent description, Turner wrote that one important element of his design were the longitudinal struts connected to diagonal web members "at a point substantially midlength thereof" and that "the framework thus formed by said struts is applied only to alternate panels. The arrangement . . . works out very economically of material in practice. By my invention a truss as provided that uses a minimum of material, it has great stiffness and it eliminates, or greatly reduces, secondary stresses" (Turner 1923). In her Historic American Engineering report for the Liberty Memorial Bridge in North Dakota, Nancy Ross writes: "The primary modification [to the Warren truss] is the reinforcing of alternate panels with a framework of steel struts. Intended to increase the overall rigidity of the truss web, the modification gives the trusses a distinctive appearance that differs considerably from the conventional Warren profile. In spite of the advantages of this novel variant of the Warren truss, the Liberty Memorial Bridge is the only example of the application of this design" (Ross 1991:11).

Ross' conclusion seems to be borne out by the Puyallup River/Meridian Street Bridge in that, although very similar to the design used for the Liberty Memorial Bridge, including longitudinal bracing in alternate panels, it is not a Turner truss. The primary difference between the two designs is that the only vertical struts in the Puyallup/Meridian Bridge are those adjacent to each portal, whereas vertical members connect the longitudinal substruts and diagonals to the bottom chords in every panel on the Liberty Memorial Bridge. In his comparison of the two bridges, retired WSDOT bridge engineer Robert Krier noted: "the absence of vertical members [on the Puyallup/Meridian Bridge] requires the diagonals of the Meridian Truss to act directly, in both compression and tension," whereas in the Liberty Memorial Bridge, the numerous verticals in the truss panels transfer some of the vertical loads indirectly into the diagonals. In addition the panel lengths are significantly different on the two bridges: 26.5 feet on the Puyallup/Meridian Bridge; 17 feet on the Liberty Memorial Bridge. Although not visibly apparent, the resulting structural requirements for the relative floor systems of the two bridges are considerably different. In order to have a more complete understanding of the load distribution of the truss members and thereby perform a structural comparison between the two bridges, it would be necessary to have the details of the sequence of the steel erection, roadway deck construction and release of falsework (Krier 2010).

When comparing the Puyallup River/Meridian Street Bridge with the Liberty Memorial Bridge in North Dakota, structures of similar design, it seems unavoidable to ask: In designing the Puyallup Bridge in 1924, did M.M. Caldwell use or borrow details from Claude A.P. Turner's truss design, patented in 1923? Given that Turner published an article about his design of the Liberty Memorial Bridge in the Engineering News-Record, the most popular nation-wide trade journal of the day, in February 1922, Caldwell probably knew of the design. The article included small drawings of the bridge's elevation and floor system, and a somewhat more detailed drawing of "SUBDIVIDED TRIANGULAR TRUSSES." Those, along with simple drawings and explanations included in the patent, published in January 1923, would have provided ample inspiration for an engineer to adapt the Turner truss details to design any long-span bridge. Turner in fact labeled his patent "LONG-SPAN BRIDGE," perhaps in case the design's applicability was unclear (Turner 1922 and 1923). However, it is questionable whether Caldwell actually would have considered it necessary to incorporate any of Turner's "Long-Span" structural features into the Puyallup Bridge, since its span of 371 feet is 105 feet shorter (22%, a significant structural difference) than Turner's bridge. Further, the subdivided Warren truss (developed in the late 1800s) and the Pennsylvania truss (developed by the Pennsylvania Railroad in 1875 with the polygonal top chord for use in long-span railroad bridges) provided Caldwell with sufficient structural features for utilization in his bridge if he so desired. As no evidence is known to exist that Caldwell either legally used the patent, or perhaps simply borrowed liberally from it without acknowledging the source, further research may reveal Caldwell's awareness of Turner's design. Regardless of his possible knowledge of Turner's truss, Caldwell's design is nevertheless another variation of a subdivided Warren through truss with its own characteristics perhaps unique to this structure.

Although it is not actually a Turner truss, the Puyallup River/Meridian Street Bridge is significant for its design, which is the only one of its kind in Washington, and may very well be unique in the US if not the world, although additional research would be needed to confirm that conclusion. Despite modest alterations over the years, and additions made for safety and structural improvement, the bridge retains integrity of design, materials and workmanship, and is thus eligible for inclusion in the NRHP under Criterion C.

Historical Background

M.M. Caldwell, as he signed his name to drawings and documents, and as his name appears on bronze plaques on the structure, designed the Puyallup River/Meridian Street Bridge. Maury M. Caldwell first appears in Seattle city directories in 1917 as simply "engineer." The next year he is identified as a clerk with the C.G. Huber Company, a Seattle firm then constructing a steel Petit truss bridge on the Cowlitz River in southwest Washington. By 1920 Caldwell had become "Chief Engineer" with the Union Bridge Company (Polks' 1916-1920). In that capacity he oversaw construction in 1921 of the James O'Farrell Bridge over the Carbon River in Pierce County, as well as construction of one mile of highway (presently SR 162) leading to the bridge (Clarke 1993:5; Hall 1994:303; Pierce County Public Works, Fairfax/O'Farrell/Carbon River Bridge file). By 1923 Caldwell was representing the Strauss Bascule Bridge Company of Chicago in promoting a movable bridge in Aberdeen, Washington (Pacific Builder and Engineer 1923:13). The company built the Wishkah River Bridge there the next year under Caldwell's direction (Lawrence 1993:3). By then he had become (in the city directory) a "consulting engineer," apparently no longer affiliated with the Union Bridge Company. Caldwell retained that status until 1942, when his name disappeared from the Seattle City directories (Polks' 1921-1942).

In November 1924 Pierce County applied for federal aid to build what was called a "Steel Highway Bridge Crossing Puyallup River Between Secs. 21 & 22, T20N, R4E." On the drawing submitted with the application, the bridge appears in elevation view to be the design used to build the bridge the next year. M.M. Caldwell's name does not appear on the drawing, however, the only signature being that of C.H. Votaw, the County Engineer. Clifford Votaw eventually supervised construction of the Puyallup River/Meridian Street Bridge, as well as the Hylebos Bridge in Tacoma, among many other Pierce County road and bridge projects (Bonney 1927:491). Undated drawings in the County's Public Works Office do, however, bear the designer's name "M.M. CALDWELL, CONSULTING ENGINEER."

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Historic Inventory Report

In early February 1925 Pierce County awarded a construction contract for $77,200 to the Puget Sound Bridge & Dredging Company of Seattle. Nine other firms had submitted bids, ranging in cost estimates from $78,989 to $93,905 (Pierce County Public Works, Meridian Street Bridge file). In announcing the award, the Puyallup Valley Tribune noted that "The new road [Meridian Street] will considerably shorten, by the northern route, the distance to Tacoma, and will also bring the big [Puyallup Indian] Reservation district a mile closer to Puyallup" (2/7/1925:1; all following citations in this paragraph are from that newspaper, except where noted). Piling and falsework had been erected across the river by mid May when the same newspaper reported that construction was ahead of schedule on the bridge, but that Meridian Street "is not in condition, nor have any definite steps been taken toward improvement or paving" (5/16/1925:1 & 10). Concrete piers were "virtually" complete when 380 tons of steel from the Virginia Bridge and Iron Company in Roanoke, Virginia, arrived on site the next month (6/13/1925:1; Pierce County Public Works, Meridian Street Bridge file). On July 4th C.J. Flem, superintendent of construction for the Company, reported that riveters had started work on the steel in place across the river, and that the 5 ½ inch-thick concrete deck was "virtually completed" (7/4/1925:1). The bridge was finished in time for the opening of the Western Washington State Fair on 21 September 1925, but Meridian Street remained unpaved, due to refusal by the City Council to fund improvements (9/19/1925:1). Finally County Commissioner Henry Ball had the street "put in shape" for Fair traffic, despite the Council's recalcitrance (9/26/1925:1). In October, work commenced near the bridge on the pyramidal concrete and stone marker with bronze plaque commemorating the first road or Indian trail across the river at the site, the first school in the Puyallup Valley housed in the Indian War blockhouse that stood "Near the north approach," and the first telegraph line to reach the community (7/26/1925:1; 10/17/1925:1).

Description of Physical Appearance:

The Puyallup River/Meridian Street Bridge's main span is a 371-foot long steel riveted, subdivided Warren through truss. Unlike the standard Warren truss, this bridge has parabolic top chords and alternating diagonal truss members, longitudinal braces between diagonals in alternating panels, and vertical members adjacent to the portals. In 1991 the portal sway braces and interior panel sway bracing was modified to increase vertical clearance for over-sized traffic from 14 feet 7 inches to 18 feet 7 inches. Although the modifications were sensitive to the original truss configuration, retaining as much of the old bracing as possible, the truss appearance has changed somewhat when viewed from the roadway. Among the changes to the deck are the 21 inch-high metal thrie beams attached to the inside (traffic) side of the trusses, reducing the roadway width by 9 inches to 21 feet. The south approach to the truss consists of a 21-foot long precast, prestressed girder span and two 19-foot long timber trestle spans (which replaced earlier timber spans), all added in 1951. The north approach consists of two 19-foot long timber trestle spans, also dating to 1951, bringing the total length of the structure to 468 feet. The truss piers are founded on timber piles, while the approach piers rest on concrete spread footings. A five-foot wide timber sidewalk is attached to the east side of the bridge. A decorative, cross-hatched lattice steel rail is attached to the outer edge of the sidewalk along the full length of the truss span, providing both improved safety for pedestrians and a somewhat aesthetic appearance to the east elevation. The bridge originally carried a lane of traffic in each direction until 1971 when a concrete bridge was built immediately adjacent to the west truss to carry southbound traffic. The modern concrete bridge rises several feet above the roadway of the historic truss bridge, detracting considerably from the aesthetics of the older bridge.

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION
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Historic Inventory Report

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Hufstetler, Mark. Liberty Memorial/Missouri River Bridge 32BL114, North Dakota. National Register of Historic Places nomination. 1996.

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Lawrence, William Michael. Wishkah River Bridge, Aberdeen, Washington, Historic American Engineering Record, HAER No. WA-92. August 1993.

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Pierce County Public Works. Meridian Street Bridge and Fairfax/O'Farrell/Carbon River Bridge files. Tacoma.

Polks' Seattle City Directories. Chicago. 1916-1942.

Puyallup Valley Tribune, all 1925, all page 1: "Contract for North Meridian Street Bridge Let For $77,200," 2/7; "Work Progresses On New Bridge," 5/16; "Receive Steel For New Bridge," 6/13; "Bridge Will Be Completed Soon," 7/4; "Huge Span at Puyallup Opens Soon," 7/26; "Puyallup Bridge Near Completion," 8/9; "New Bridge To Be Open For Fair," 8/15; "Bridge Finished; Street Unpaved," 9/19; "Ball Continues To Aid In Improving Meridian," 9/26; "Work Commenced On Concrete Marker," 10/17.

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Soderberg, Lisa. Historic American Engineering Record inventory sheet for Category 2 Puyallup River/Meridian Street Bridge. On file, Department of Archaeology and Historic Preservation, Olympia, March 1979.

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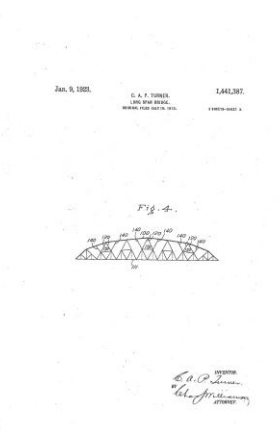
Historic Inventory Report

Photos

2011

Original portal braces prior to removal and replacement.
1947

Deck view to north.
2011



C.A.P. Turner's 1923 patent for a "long-span" truss bridge.
1923

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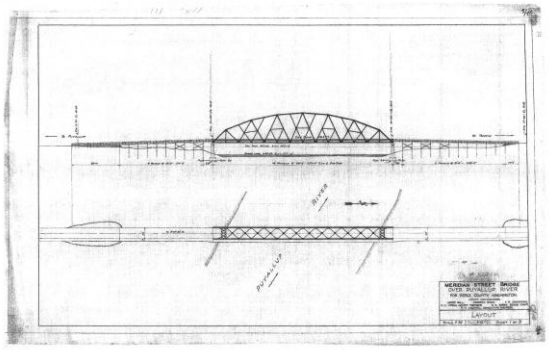
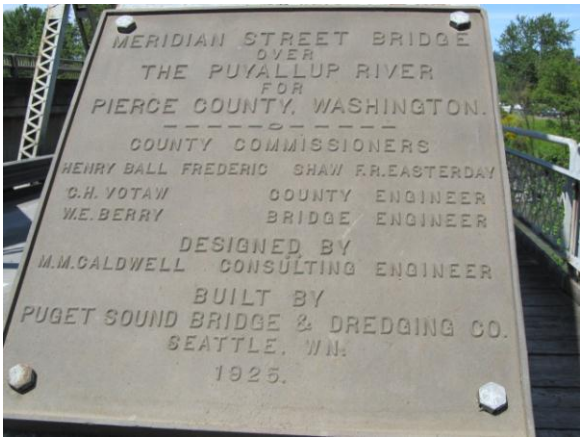
Historic Inventory Report



Meridian St. Bridge elevation drawing by M.M. Caldwell
2011



Plaque on bridge showing M.M. Caldwell, designer, and Puget Sound Bridge & Dredging Co., Seattle, builder.
2011

Replaced portal brace.
2011

Newer bridge (#167/20W, foreground) and older (1925) bridge to northeast.
2011

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Historic Inventory Report

Sidewalk on east side.
2011

Subdeck to north.
2011

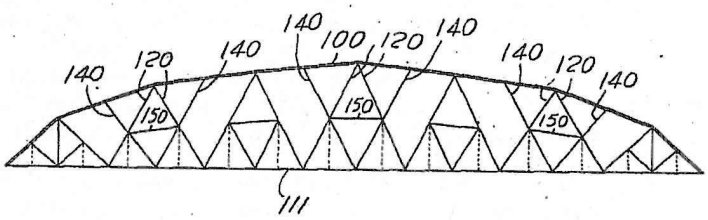
Jan. 9, 1923. 1,441,387.

C. A. P. TURNER.

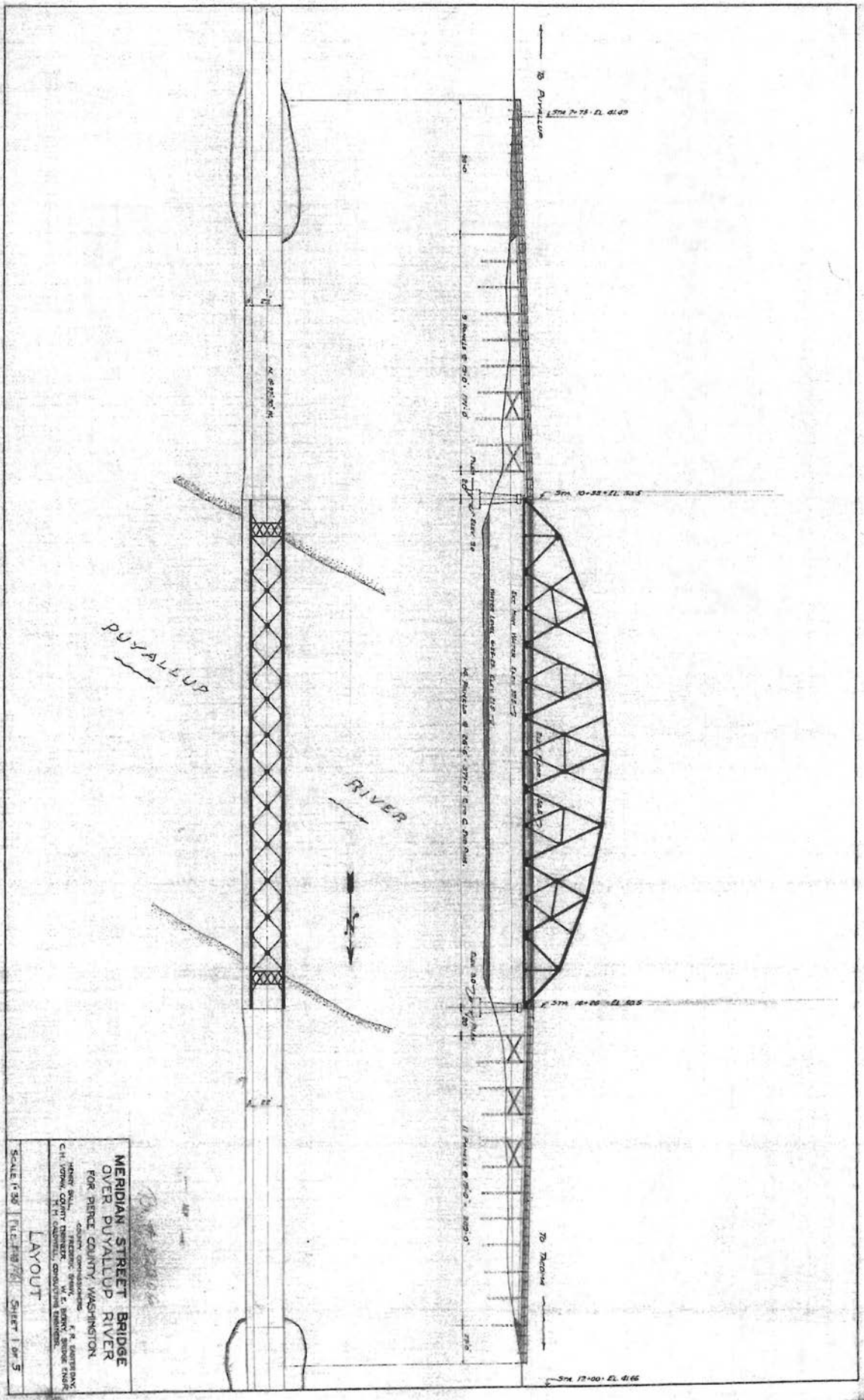
LONG SPAN BRIDGE.

ORIGINAL FILED JULY 10, 1913. 3 SHEETS—SHEET 3.

Fig. 4.



INVENTOR.
C. A. P. Turner.
BY Edward J. Williamson
ATTORNEY.


PUYALLUP
RIVER
MERIDIAN STREET BRIDGE
OVER PUYALLUP RIVER
FOR PIERCE COUNTY, WASHINGTON
LAYOUT
SCALE 1"=30'
SHEET 1 OF 5

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION
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Historic Inventory Report

Location

Field Site No. DAHP No.

Historic Name: Fort Maloney Historical Marker

Common Name: Ft. Steilacoom-Ft. Bellingham Military Marker

Property Address: 0000 N Levee Rd N, Puyallup, WA

Comments:

Tax No./Parcel No.

Plat/Block/Lot

Acreage

Supplemental Map(s)

Township/Range/EW	Section	1/4 Sec	1/4 1/4 Sec	County	Quadrangle
T20R04E	21	SE	SE	Pierce	PUYALLUP

Coordinate Reference

Easting: 1194448

Northing: 687108

Projection: Washington State Plane South

Datum: HARN (feet)

Identification

Survey Name: Puyallup River Bridge 167/20E Project Date Recorded: 06/08/2012

Field Recorder: Craig Holstine

Owner's Name: Pierce County

Owner Address: 0000

City: Tacoma State: WA Zip: 98409

Classification: Structure

Resource Status: Comments:
Survey/Inventory

Within a District? No

Contributing? Yes

National Register:

Local District:

National Register District/Thematic Nomination Name:

Eligibility Status: Not Determined - SHPO

Determination Date: 1/1/0001

Determination Comments:

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION
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Historic Inventory Report

Description

Historic Use: Recreation and Culture - Monument/Marker

Current Use: Recreation and Culture - Monument/Marker

Plan: Unknown

Stories: 0

Structural System: Mixed

Changes to Plan: Not Applicable

Changes to Interior: Not Applicable

Changes to Original Cladding: Not Applicable

Changes to Windows: Not Applicable

Changes to Other: Extensive

Other (specify): location is not original (1925)

Style:	Cladding:	Roof Type:	Roof Material:
Other	None	None	None

Foundation:	Form/Type:
Concrete - Poured	None

Narrative

Study Unit

Other

Politics/Government/Law

Date of Construction: 1925 Built Date

Builder: Washington State Historical Society

Engineer:

Architect: Washington State Historical Society

Property appears to meet criteria for the National Register of Historic Places: No

Property is located in a potential historic district (National and/or local): No

Property potentially contributes to a historic district (National and/or local): No

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Historic Inventory Report

Statement of Significance:	Construction of this monument began "at the north end of the Meridian Street Bridge" on 16 October 1925. It was completed by 30 October when dedicated "under the auspices of the Washington State Historical Society" (Bonney 1926:36). The marker has been recorded previously: by Gary Fuller Reese as the "Fort Steilacoom-Fort Bellingham Military Marker" in 1974; by Caroline Gallacci as the "Fort Malone [sic] Historical Marker (PC-96-15)" in 1982; and by Charles T. Luttrell (per Gallacci's title) in 2000, who recommended the structure not be determined NRHP eligible because "its design, age, tradition or symbolic value has not invested it with its own significance." On 14 April 2003 the WSDOT determined the marker not NRHP eligible, and the Washington SHPO agreed 10 February 2004. Since the monument does not appear to possess aesthetic values of the period of its creation; nor has it defined the historic identity of the area; nor has it come to symbolize the values, ideas, or contributions valued by the generation that erected it, the marker is not eligible for inclusion in the NRHP meeting the requirements of Criteria Consideration F: Commemorative Properties. In addition, the monument has been moved from its original construction location. According to a 1971 WSDOT plan map for the new bridge on SR 167, the marker was shown as "Relocated," either previous to, or a part of, the planned bridge construction. During the Indian War of 1855-56 in Western Washington, soldiers with the 4th Infantry under US Army Capt. Maurice Maloney built a blockhouse in the vicinity of the present historical marker to protect the Carson Ferry. Standing on the north bank of the Puyallup River, the blockhouse apparently consisted of a two-story log building with the upper story overhanging an unusually low main floor. It was named for Capt. Maloney, who was born in Ireland ca. 1812. He had begun his Army career when he enlisted as a private in 1836; was commissioned a second lieutenant in 1846, and fought in the Seminole War and at the Battle of Chapultepec in the Mexican War. For a brief time during the Indian War of 1855-56, he was the commanding officer of Fort Steilacoom. While in the Pacific Northwest, Maloney commanded Co. A of the 4th Infantry at Forts Steilacoom and Chehalis, and at Camp Montgomery. During the Civil War, he was promoted to the rank of major in 1862 and commanded siege guns at Vicksburg in 1863. Known as Battery Maloney, the position is today known as Maloney's Circle in Vicksburg National Military Park. In 1865 Maloney was promoted to colonel and commanded the 13th Wisconsin Voluneers. Maloney retired in 1870 and died in Green Bay, Wisconsin, in January 1872.
Description of Physical Appearance:	Standing ca. 7 meters south of the N. Levee Road fog line and ca. 45 meters west of the stop sign at the intersection of N. Levee Road and the SR 167 southbound lanes is a mortared cobblestone pyramid on a ca. 7 ft square concrete base. Four granite slabs have been attached to the upper face of each of the pyramid's sides. The stone plaques read: "ONE NIGHT IN OCTOBER 1855, ABRAHAM SALATAT, AN INDIAN, RODE THROUGH THE PUYALLUP VALLEY WARNING WHITE SETTLERS THAT A WAR PARTY OF INDIANS WAS COMING. IN 1855 UNDER TERRITORIAL CHARTER JOHN CARSON BUILT A TOLL BRIDGE HERE. IT WAS CARRIED AWAY BY FLOODS DURING THE WINTER OF 1862-63. IN FEBRUARY 1856 U.S. SOLDIERS ERECTED FORT MALONEY HERE TO PROTECT THE JOHN CARSON FERRY. THE SUMMER OF 1861 MRS. E. L. CARSON TAUGHT SCHOOL AT FORT MALONEY. MILITARY ROAD FROM STEILACOOM TO BELLINGHAM CROSSED PUYALLUP RIVER HERE 1864. FIRST TELEGRAPH LINE THROUGH STATE WAS STRUNG OVER THIS ROAD. WASHINGTON STATE HISTORICAL SOCIETY, 1925."

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Historic Inventory Report

Major Bibliographic References:

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Forts of Washington Website: http://themossback.tripod.com/forts/forts2.htm.

Gallacci, Caroline. "Fort Malone Historical Marker (PC-96-15)." Historic Property Inventory form, on file, Department of Archaeology and Historic Preservation, February 1982.

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Luttrell, Charles T. Fort Malone Historical Marker (PC-96-15). Historic Property Inventory Report, OAHP No. 27-1705. On file, Department of Archaeology and Historic Preservation, Olympia, 12 July 2000.

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Reese, Gary Fuller. "Fort Steilacoom-Fort Bellingham Military Marker." Historic Property Inventory form , on file, Department of Archaeology and Historic Preservation, August 1974.

Whitney, Thomas. Fort Malone Historical Marker NRHP Determination of Eligibility. 14 April 2003.

Washington State Department of Transportation. Plan map for new bridge on SR 167. Sheet 49 of 202 sheets. Bridge Engineering Information System (BEISt), on line, Olympia. 11 February 1971.

"Work Commenced on Concrete Marker." Puyallup Valley Tribune, 17 October 1925, p. 1.

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION
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Historic Inventory Report

Photos

Marker to West
2012

Monument to SE, with SR 167 bridges over Puyallup River behind.
2012

Marker to West
2012

Plaque on east side of marker
2012

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION
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Historic Inventory Report

Location

Field Site No. DAHP No.

Historic Name: North Bank Puyallup River Revetment

Common Name:

Property Address: 0000 Meridian St N, Puyallup, WA 98424

Comments:

Tax No./Parcel No.

Plat/Block/Lot

Acreage

Supplemental Map(s)

Township/Range/EW	Section	1/4 Sec	1/4 1/4 Sec	County	Quadrangle
T20R04E	22			Pierce	PUYALLUP

Coordinate Reference

Easting: 1194611

Northing: 686971

Projection: Washington State Plane South

Datum: HARN (feet)

Identification

Survey Name: Puyallup River Bridge 167/20E Project Date Recorded: 06/08/2012

Field Recorder: Craig Holstine

Owner's Name: Pierce County Public Works

Owner Address:

City: Tacoma State: WA Zip:

Classification: Structure

Resource Status: Comments:
Survey/Inventory

Within a District? Not Identified

Contributing? No

National Register:

Local District:

National Register District/Thematic Nomination Name:

Eligibility Status: Not Determined - SHPO

Determination Date: 1/1/0001

Determination Comments:

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Historic Inventory Report

Description

Historic Use: Government - Public Works
Current Use: Government - Public Works
Plan: Other
Stories: 0
Structural System: Mixed
Changes to Plan: Intact
Changes to Interior: Not Applicable
Changes to Original Cladding: Not Applicable
Changes to Windows: Not Applicable
Changes to Other:
Other (specify):

Style:	Cladding:	Roof Type:	Roof Material:
None	Stone - Cobble Stone	None	None

Foundation:	Form/Type:
Concrete - Poured	Utilitarian

Narrative

Study Unit
Other
Politics/Government/Law

Date of Construction:
1971 Built Date
Builder:
Engineer:
Architect:

Property appears to meet criteria for the National Register of Historic Places: No
Property is located in a potential historic district (National and/or local): No
Property potentially contributes to a historic district (National and/or local): No

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Historic Inventory Report

Statement of Significance:

Typical of Western Washington rivers, the Puyallup has over-spilled its banks and, in historic times, flood control structures with great regularity. Subsequent to massive flooding in December 1906, Pierce and King counties agreed to form taxing districts to support flood control efforts. Construction of dams, dikes, levees and revetments began in 1914 under the auspices of the Inter-County River Improvement organization (Roberts 1920). Flood waters remained undaunted, however, topping and undermining new facilities; in 1917 and 1933 floods destroyed most existing structures, which were subsequently rebuilt over the years. Even construction of Mud Mountain Dam in the 1940s failed to prevent periodic high-water damage (Dorpat and McCoy 1998:259-61). Today the counties continue to replace rock on existing revetments. In 2009 the City of Puyallup placed riprap atop the north bank revetment in an unsuccessful attempt to keep flood waters and debris off the roadway leading to North Levee Road (Dixon).

The rock revetment on the north bank of the Puyallup River under the SR 167 bridges is the most recent iteration of earlier flood barriers. By 1915 the oxbow meanders immediately upstream and downstream of the older bridge had been eliminated, forcing the river into its present channel now crossed by the highway bridges (Kroll 1915). Presumably a revetment was built at that time to stabilize the north bank. A ca. 1924 design drawing of the 1925-built bridge does not show any flood control structures under the approaches or around the piers (Caldwell drawing, BEISt). Two later, although undated, photos show the 1925-built bridge atop massive concrete levees on both banks of the river (Dorpat and McCoy 1998:264; WSDOT Bridge and Structures Office). Those levees do not presently exist under the two SR 167 bridges. The levee on the south bank is still in place a short distance downstream from (west of) the newer (1971-built) bridge, and although not visible, may still be in place upstream and downstream from the bridges on the north bank. In 1950 the US Army Corps of Engineers rebuilt revetments and levees when the river's channel capacity was increased, and some of that work may have involved the structures under the bridges. A reconfiguration of flood control structures could have been at least part of the reason the approaches to the 1925-built bridge were rebuilt in 1951 (CARDEX file, WSDOT Bridge and Structures Office; Stevens 1951).

The north-bank revetment appears to be of recent construction, with rocks probably larger than early trucks and construction equipment could easily have moved into place. A Pierce County Public Works official believes it has been rebuilt in the recent past (Dixon). A 1971 "Plan" drawing for the new bridge shows "Top of Exist. Concrete Slope Protection" on the river's north bank where the present roadway accessing North Levee Road passes under the bridges (WSDOT 1971). The present revetment apparently dates to the 1971 bridge construction or sometime thereafter when the earlier flood control structure was either removed or covered by a new structure. Thus the original revetment or levee in this location has lost integrity of materials, workmanship, and feeling (if not design), and is not NRHP eligible.

Description of Physical Appearance:

A revetment consisting of boulders up to two feet in diameter stacked at an angle greater than 45 degrees armors the north bank of the Puyallup River under the SR 167 bridges. (No similar revetment exists on the south bank of the river under the bridges, although revetments and levees exist beyond the SR 167 right-of-way both upstream and downstream.) The revetment rises approximately 8 feet above an inclined base of similar sized boulders that extends into the river. Unconsolidated boulders, rocks and gravels have been dumped atop the revetment to add protection to the roadway under the bridges connecting North Levee Road with northbound traffic off the 1925-built bridge. Extending beyond the bridges in both directions for undetermined distances, the revetment has been built up around the piers of both the 1925-built and 1971-built bridges, suggesting its installation being contemporaneous with, or after, the latter bridge's construction date.

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION
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Historic Inventory Report

Major Bibliographic References:

BEISt (Bridge Engineering Information System). WSDOT, on line, Olympia.

Caldwell, M.M. Meridian Street Bridge over Puyallup River "Layout" drawing. BEISt, ca. 1924. BEISt, WSDOT, on line, Olympia.

Dixon, Dennis. Surface Water Management Office, Pierce County Public Works Department, Tacoma. Personal communication, 2012.

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Roberts, W.J. Report of W.J. Roberts, Chief Engineer Inter-County River Improvement, on White-Stuck and Puyallup River in King and Pierce County, Washington, Period January 1914 to December 31, 1919. Published by King and Pierce Counties. Copy in Washington State Library, January 1920.

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WSDOT Bridge and Structures Office. CARDEX, correspondence and photograph files. Tumwater.

Washington State Department of Transportation. Plan map for new bridge on SR 167. Sheet 49 of 202 sheets. Bridge Engineering Information System (BEISt), on line, Olympia. 11 February 1971.

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION
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Historic Inventory Report

Photos

North bank revetment under SR 167 bridges
2012

N. bank revetment under SR 167 bridges
2012

Revetment wall on N. bank Puyallup River, view to east
2012

Riprap atop north bank Puyallup River Bridges revetment
2012

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION
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Historic Inventory Report

Location

Field Site No.

DAHP No.

Historic Name: Paul A. Lindsay House

Common Name:

Property Address: 1029 Meridian St N, Puyallup, WA 98371

Comments:

Tax No./Parcel No. 0420223045

Plat/Block/Lot

Acreage

Supplemental Map(s)

Township/Range/EW	Section	1/4 Sec	1/4 1/4 Sec	County	Quadrangle
T20R04E	22			Pierce	PUYALLUP

Coordinate Reference

Easting: 1194613

Northing: 685830

Projection: Washington State Plane South

Datum: HARN (feet)

Identification

Survey Name: Puyallup River Bridge 167/20E Project

Date Recorded: 06/08/2012

Field Recorder: Craig Holstine

Owner's Name: Northeast Corner Properties LLC

Owner Address: POB 538

City: Puyallup **State:** WA **Zip:** 98371

Classification: Building

Resource Status: Survey/Inventory

Comments:

Within a District? No

Contributing? No

National Register:

Local District:

National Register District/Thematic Nomination Name:

Eligibility Status: Not Determined - SHPO

Determination Date: 1/1/0001

Determination Comments:

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION
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Historic Inventory Report

Description

Historic Use: Domestic - Single Family House
Current Use: Domestic - Single Family House
Plan: Rectangle
Stories: 1
Structural System: Braced Frame
Changes to Plan: Intact
Changes to Interior: Extensive
Changes to Original Cladding: Intact
Changes to Windows: Intact
Changes to Other:
Other (specify):

Style:	Cladding:	Roof Type:	Roof Material:
Vernacular	Shingle - Coursed	Gable - Side Gable	Asphalt / Composition

Foundation:	Form/Type:
Concrete - Poured	Single Family - Side Gable

Narrative

Study Unit
Architecture/Landscape Architecture

Other

Date of Construction: 1940 Built Date

Builder:
Engineer:
Architect:

Property appears to meet criteria for the National Register of Historic Places: No
Property is located in a potential historic district (National and/or local): No
Property potentially contributes to a historic district (National and/or local): No

Statement of Significance: Although the house retains much of its exterior integrity, it lacks architectural distinction and is not eligible for inclusion in the National Register of Historic Places. Installation of vinyl windows has compromised that integrity, most prominently on the structure's primary façade. Pierce County Assessor-Treasurer's information shows the house's construction date as 1955. However, given the house's style and construction, it seems likely it was built earlier. The City Directory indicates that Paul A. Lindsay, a janitor at Maplewood School, and his wife Adolphine lived at this address in 1947. By 1950 Lindsay had become a teacher at the school. Despite his probable salary increase, it seems unlikely that the Lindsays would have built a new house here five years later. They continued living in the house at least through 1961.

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Historic Inventory Report

Description of Physical Appearance:

This one-story vernacular house is clad in wood shingle siding. Its side-facing gable roof is covered in composition shingles. A short brick chimney protrudes from the roof ridge, and a full-height brick chimney is on the south wall. The walk-in basement is accessible via a pedestrian door centered on the rear (east) concrete wall. Fixed windows in that wall provide light to the basement's interior. A concrete driveway off Meridian descends to a sunken gravel parking area behind the basement.

A pedestrian door opens onto a modern wood deck that extends off the rear (northeast corner) of the house. Abutting four-light windows join on the northeast corner of the house, and a matching window is on the north wall. Three-light windows are on the south and east walls. Modern vinyl slider windows are in the gables on the north and south walls. Larger vinyl slider windows flank the front entry. A small gable awning covers the two concrete steps leading to the modern front door, which is centered in the west wall facing onto Meridian Street. Corrugated plexiglass is attached to the posts supporting the front entry awning.

Major Bibliographic References:

Pierce County Assessor-Treasurer. Building Characteristics for Parcel 0420223045. On line at http://epip.co.pierce.wa.us.

R.L. Polk & Company. Polk's Puyallup City Directory. Seattle, 1947, 1950, and 1961.

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Historic Inventory Report

Photos

West (front) & south elevations
2012

West & north elevations
2012

East (east) and south elevations
2012

West (front) elevation
2012

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Historic Inventory Report

Location

Field Site No.

DAHP No.

Historic Name: Mead M. Murray House

Common Name:

Property Address: 1103 Meridian St N, Puyallup, WA 98371

Comments:

Tax No./Parcel No. 0420223025

Plat/Block/Lot

Acreage

Supplemental Map(s)

Township/Range/EW	Section	1/4 Sec	1/4 1/4 Sec	County	Quadrangle
T20R04E	22			Pierce	PUYALLUP

Coordinate Reference

Easting: 1194652

Northing: 685929

Projection: Washington State Plane South

Datum: HARN (feet)

Identification

Survey Name: Puyallup River Bridge 167/20E Project

Date Recorded: 06/08/2012

Field Recorder: Craig Holstine

Owner's Name: Northeast Corner Properties LLC

Owner Address: POB 538

City: Puyallup **State:** WA **Zip:** 98371

Classification: Building

Resource Status: Survey/Inventory

Comments:

Within a District? No

Contributing? No

National Register:

Local District:

National Register District/Thematic Nomination Name:

Eligibility Status: Not Determined - SHPO

Determination Date: 1/1/0001

Determination Comments:

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Historic Inventory Report

Description

Historic Use: Domestic - Single Family House
Current Use: Vacant/Not in Use
Plan: Rectangle
Stories: 2
Structural System: Braced Frame
Changes to Plan: Intact
Changes to Interior: Unknown
Changes to Original Cladding: Intact
Changes to Windows: Intact
Changes to Other:
Other (specify):

Style:	Cladding:	Roof Type:	Roof Material:
Vernacular	Wood - Drop Siding	Gable - Side Gable	Asphalt / Composition

Foundation:	Form/Type:
Concrete - Poured	Single Family

Narrative

Study Unit
Architecture/Landscape Architecture

Other

Date of Construction: 1920 Built Date

Builder:
Engineer:
Architect:

Property appears to meet criteria for the National Register of Historic Places: No
Property is located in a potential historic district (National and/or local): No
Property potentially contributes to a historic district (National and/or local): No

Statement of Significance: This abandoned, vernacular house retains considerable integrity of design and materials on its exterior, most notably its cladding, wood windows, and wood rain gutters. Despite the house's retention of some historic appearance, however, its deteriorated condition and lack of architectural distinction render it ineligible for inclusion in the National Register of Historic Places. In 1936 Mead M. and Wilma Murray lived in this house, which at that time was 103 N. Meridian. (Three years later it was 1003 N. Meridian; by 1947 the address had become 1103 N. Meridian.) The Murrays continued to live there at least through 1958. By 1961 Glen M. and Jean B. Freeman lived in the house. Pierce County records say the house was built in 1900. That date appears to be too early, given the style and materials used in the house's construction (especially the drop siding), and the probable age of N. Meridian Street. The roadway may not have existed in its present alignment until shortly before the Puyallup River Bridge was built in 1925. At the time of the bridge's construction, N. Meridian was an unimproved, unpaved roadway. It took action by a county commissioner and the approaching opening of the Western Washington Fair of 1925 to finally improve the street.

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Historic Inventory Report

Description of Physical Appearance:

This vernacular two-story house facing N. Meridian Street is largely screened from view by maple, oak, birch and other large trees and shrubs that have overgrown the property. A side-facing gable roof with composition shingles covers the house. Gabled dormers protrude from the west-facing (front) roof. The second level is enlarged off the east-facing roof by what amounts to a large shed-roof wall dormer that extends nearly the entire length of the elevation. What appears to be original wide, horizontal wood siding covers all the house's walls. Most windows are double-hung sash, with large plate-glass windows in the west (front) and north walls. Fixed three-light windows are in the basement's concrete window wells. Brick steps access the brick-edged front porch in front of the main entry, which is recessed behind wood corner pilasters, a wide wood frieze, and a missing capital or awning. North of the front entry, the northwest corner of the house is a bumped-out bay with cornice returns shaped to function as rain gutters. Elsewhere on the house, as well as on the garage to the rear of the house, the rain gutters are wooden, although sections are extremely deteriorated or altogether missing. Under a shed-roofed awning supported by knee braces, the back door is centered on the house's rear (east) wall. Accessed by concrete steps and a small concrete porch, the door has been boarded over with plywood. South of the back entry is a recessed concrete porch. Squared wood posts with decorative capitals support the overhanging second story that covers the porch. Ten-light French doors open onto the porch from what was presumably the dining room. A corbeled and battered full-height chimney is on the house's south wall. Behind the house is a frame, single-car garage accessed by a concrete driveway off N. Meridian along the north side of the house. The garage's wide, horizontal wood siding matches that of the house, probably indicating contemporary construction. A plastic tarpaulin covers the wood-shingled gable roof. The vehicle door is missing, but a wood pedestrian door is in place on the garage's west wall, as is a 6-light fixed window. The concrete floor on the interior is intact, although the building itself is leaning to the northeast, thanks to an elm tree leaning on the garage's roof at its southwest corner.

Major Bibliographic References:

E.T. Krefting. The Puyallup Valley Directory. Puyallup, 1936 and 1939.

Pierce County Assessor-Treasurer. Building Characteristics for Parcel 0420223025. On line at http://epip.co.pierce.wa.us.

Puyallup Valley Tribune. "New Bridge to Open for Fair," 2/15; "Bridge Finished; Street Unpaved," 9/19; "Ball Continues To Aid in Improving Meridian," 9/26. 1925.

R.L. Polk & Company. Polk's Puyallup City Directory. Seattle, 1947, 1950, and 1961.

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Historic Inventory Report

Photos

West & north elevations
2012

South elevation
2012

East and north elevations
2012

East (rear) elevation
2012

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Historic Inventory Report

2012

Garage and rear of house
2012

Wood rain gutter on garage
2012

Wood rain gutter on house rear
2012